RESEARCH ON TUTORIAL SYSTEMS OF THE OPEN UNIVERSITY OF INDONESIA : Factors Affecting Student Learning Outcomes

Volume II

Aria Djalil
Subandijo
Isfarudi
Greta Librata

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

UNIVERSITAS TERBUKA

MINISTRY OF EDUCATION AND CULTURE, INDONESIA

1987

FOREWORD

This is the second report which marks the second stage of research on tutorial systems of The Universitas Terbuka (UT) conducted by UT's research team and sponsored by The International Development Research Center (IDRC) of Canadian Government. The report, Volume II, contains major correlational findings in which several hypotheses regarding what factors affecting student learning outcomes were tested. The first, Volume I, was the report of the first stage of similar study containing major descriptive findings, completed by the team in 1986.

The research of this type is still rather rare, and this one is the first time ever conducted in Indonesia, in the context of distance higher education system. It is expected the results can be of considerable value in providing essential information and data to UT headquarters and Regional Centers upon which sound policies regarding the improvement of tutorial systems can be based.

This report is a result of the whole-hearted endeavour and support of many people. I would like to specially express my sincere gratitute to Dr H Dean Nielsen of IDRC for his overall guidance and assistance in the project.

I am grateful to Dr Aria Djalil, Director of UT-Research Center who had the major responsibility for directing and for carrying out the research, analysing the data and writing the report, and to Mr Subandijo, Mr Isfarudi and Ms Greta Librata for their valuable works on the analysing the data and writing the report.

I am grateful also to all those who had participated in testing research instruments and collection of data.

My sincere thanks are given to the participating Regional Centers and students, without their cooperation this study could not have been conducted.

I thank to Miss Etty Mahdiarti, Mrs Sulistiorini, Miss Neneng Nurhayati, Miss Tetrani Susilowati, Miss Lusi Imawati, and Miss Anis Surtiani for their assistance in making the report ready for publication.

Finally, I thank IDRC, who provides UT financial assistance to carry out the research.

Setijadi
Rector of Universitas Terbuka

CONTENTS

Chapter I

RESEARCH PROBLEMS, OBJECTIVES AND MODELS

1.1 Research Problems and Objectives

The statement to give equal opportunities in education has brought positive results in developing quite rapidly education aspirations in Indonesia. Since PELITA I in 1969 in particular, the number of primary and secondary school age children that were admitted in school has increased. At the beginning of PELITA IV-1983/1984-97,20% of 20,808,000 of primary school age children had a place in school, while 44% of 10.7 million junior secondary school age students and 25.30% of 9.9 million senior secondary school age students were admitted (REPELITA IV, 1984). This development directly or indirectly increased the number of students who wish to get higher education. As an illustration, by the time the UT was established in 1984, there were 720,700 senior secondary school graduates, while there were 483,000 students who tried their luck through the SIPENMARU (University Entrance Examination). Last year, 1986/1987, there were 875,000 graduates and 617,000 took the SIPENMARU. Conventional universities, however, can take in only 15% of them. This urged the government to set up the open university, which officially inaugurated on September 4, 1984, to enlarge the capacity of admission of senior high school graduates and give those who already work a chance to continue to tertiary education.

The effort was not in vain. At the very beginning there were more than 200,000 candidates, but only 41,911 students, and 10,000 teachers who wanted to get teaching qualifications were admitted. After less than three years, that is in the 1986/1987 academic year, UT has

accomodated 140,000 students. This of course raised the problem of how to serve so many students as well as possible. One of the services is face to face tutorial. A while ago when this idea was exposed one of the doubts of the public, including the professionals, towards the success of this new idea was the very minimal direct guidance of lecturers to students. Of course for UT it would not be possible to arrange direct, frequent and intensive guidance since this is not a characteristic of a distance teaching system. As students are spread out even to the remotest areas in almost all parts of Indonesia, and taking into consideration other limitations, the planning and implementation of tutorials was left to 32 Regional Centers (UPBJJ). UT in this case only determined the basic policies, for instance, determine the unit cost of tutorials, how many tutorials there should be in one/two semesters and how long each session should take. UT also sets minimal requirements for those who were going to be tutors. Detailed planning and its implementation were left to each UPBJJ. It should be noted that the UPBJJ management was done in cooperation with the local universities or with other institutions if cooperation with the university was not possible.

To run a university through distance education system became a new educational enterprise for Indonesia. Hence, it was logical to assume that most of Regional Centers had very limited experience to run the system; the tutorial plans they made were presumably at a try out level. Big differences and variations between the 32 Regional Centers in conducting tutoring programs were also anticipated. They would face numerous problems as well. On the other hand, it was not impossible that some Centers would be successful in implementing tutorials; they

might have successfully developed tutorial approaches and models. Extensive, comprehensive and reliable information on how tutorials have been designed and implemented would be useful for UT to develop an effective model in the future.

The research was done in two stages. The first stage was an Exploratory Study aimed at giving a descriptive report on how the Centers plan and implement tutorials; approaches and techniques they apply, the problems they face, and what positive experiences they have obtained. The result of this first stage has been reported (see UT, IDRC, 1986) and it has greatly contributed in identifying variables and groups of variables expected to give more specific information about what influences the success of these tutorials.

This report is part of the second stage of the study which is meant to test various possibilities of correlations among the students variables (background, perception and opinion of students related to tutorials, and their motive to register at UT), and tutoring approach variables and student learning outcome variables (attendance rate, satisfaction and academic achievement). Information on the nature and pattern of relation among those variables are hopefully useful in finding elements or a combination of elements which will become the characteristics of a tutorial models to be proposed to the Centers.

1.2 Model of the Study

In line with the title of this research: Research on Tutorial System", the models used in "Research on Teaching" (see among others Medley 1979; Dunkin and Biddle, 1974, Gage 1963) have contributed much in solving problems and answering research questions and hypothesis developed in the study. The elements of the model are

developed from several basic hypotheses (detailed hypotheses will be presented in Chapter II):

1. Good tutoring must be aimed at getting optimal learning outcomes; be academic behaviour, attitude, perception or achievement of the students;
2. Certain tutoring behaviours have inwardly the role of creating an effective teaching-learning process to achieve certain learning outcomes;
3. The student's background and certain motivations, such as reasons why they register at UT and why they attend tutorials and what problems they face are variable groups that are assumed to affect learning outcomes;
4. Certain preparations made by the students before entering UT or in relation to tutorials are also expected to affect learning outcomes; and
5. Feasibility to make use of tutorial services at the Centers affect the students' learning outcomes.

The figure in the appendix shows in a simple way the research model.

It is worth noting that this model has some limitations; it is only based on the assumption that there is a bivariate correlation between independent and dependent variables, without taking into account inter-correlations which might exist between the independent variables themselves. Moreover the model above is not meant to test the possibilities of causal relations. Explicitly this model is also not yet meant to develop a prediction model between a number of predictors with one or more criterion variables. Furthermore this model is not yet directed to assume interactive relations between certain independent variables and moderator variables. Nevertheless, after careful

observation of the magnitude and direction of relations of the variables in this model, it is not unlikely to explore a prediction model and to check whether or not there is an interactive relation.

About this last matter, in a more complete report of Stage II of research where data to be analized will also be more complete, the predictive and interactive hypotheses will be further tested.

Chapter II

HYPOTHESIS AND DEFINITION OF VARIABLES

From previous research results (see a.o. Coleman, et.al., 1966; Mangindaan, et.al., 1978; Moegiadi, et.al., 1979) it is clear that in several cases the learning outcomes are affected by the background of the schoolchild. The background may be genetic (age, sex, intelligence, talent), socio-economic status (parents' education and occupation background, income, etc.) and the academic background of the child himself (previous level of education, total education experience, relevance between previous and current education, etc.)

With respect to above consideration, a hypothesis tested in the study is:

H_1 : The backgrounds of UT students correlate positively and significantly with their learning outcomes.

What is meant by the background of an UT student in the study is: age, sex, marital status, occupation, working experience, income, experience at other universities, magazines/books read and courses followed relevant with the study program selected at UT.

Learning outcomes were formulated as:

1. Rate of attendance of students in tutorials organized by the Regional Centers for English language and Mathematics in Semester III;
2. Satisfaction about tutorials so that students feel they are able to make an abstract of the material the tutor has explained, find the tutor's presentation interesting and, find the tutorials useful

to widen their knowledge and skills;

3. Overall perception of the students on tutorials related to: the tutors' background; ability to divide time; presentation of the material; ability to create a tutorial climate; quality and services given by the Regional Centers; and the students' perception of the role of study groups and extra tutorials.
4. Results of end semester III examination of English language and Mathematics.

Literatur on psychology usually discusses the importance of studying motifs and drives within a person, so that we can infer and understand his acts, decisions, and other forms of expression, and in turn we will be able to predict the influence or results of his acts and decisions. In this study the motifs or reasons for entering UT may be related to academic behaviour, satisfaction, and achievements of the students. Based on this is defined:

H_2 : Reasons that made them become UT students may affect significantly their attendance at tutorials, level of satisfaction, perception and results of the end of semester examination.

There are some indicators that are included in the reasons for entering UT:

1. The will to develop the career.
2. They had no opportunity to study.
3. They were not admitted to other universities.
4. To keep their minds active.
5. To be able to find another job.
6. To study the material more intensively.

7. To get promotion.
8. To get friends.
9. To fill their time before admitted to other universities.

Paralel with the above, there may be a number of reasons which pushes the students to attend the tutorials or not. Based on this the next hypothesis to be tested is:

H_3 : Reasons that push students to attend tutorials may correlate positively and significantly with their degree of attendance in tutorials, level of satisfaction, perception and the result of their examination.

The reasons for attending tutorials are:

1. To get a direct picture of UT Regional Centers.
2. To know the fellow-students.
3. To ask questions about the lessons.
4. To enhance the spirit of learning.
5. To know how to study independently.
6. To fill the time.
7. Tutorials are a must.
8. To enlarge their knowledge.

Ever since the establishment of UT there were rumours and complaints that the location of the tutorial centers in the capital city of the province or in big cities will hamper students to attend tutorials. This is understandable because UT students live in the remotest areas far from the center of tutorials. Therefore it is reasonable to test the hypothesis below:

H_4 : There are significant correlations between the long distance and the time spent, and the decrease of attendance in tutorials, the growth of dissatisfaction and negative perception towards tutorials, and then a tendency to have a negative effect towards the results of students' end of semester examination.

The distance and time spent to reach the location of tutorials are two variables each of which is measured based on the unit of distance, that is, kilometres and the unit of time, that is, hours.

One suggestion that is always given to the students to get the most out of tutorials is to read the modules first. This suggestion is meant to help them to have a previous cognitive preparation. This looks somewhat like one of Bloom's (1974) well-known variable called CEB or Cognitive Entry Behaviour. It is therefore interesting to test the hypothesis below:

H_5 : There are positive and significant correlations between reading the module first before it is discussed in tutorial, and attendance at tutorials, satisfaction and positive perception, and the results of the end of semester examination.

The issue of who is the effective teacher/instructor/tutor has for a long time been a problem area that has had serious attention of researchers (see a.o. Morsh and Wilder, 1954; Bennett, 1976; Brophy and Evertson, 1974).

Although several researchers have found positive and significant correlations between characteristics of certain teachers and learning outcomes, yet this correlation became inconsistent through other

researchers: negative, insignificant or no correlation at all.

This encouraged the researchers to turn from the who issue to the issue of what has been done by a teacher which has a correlation with learning activities. In other words they no longer focused on the "effective teachers", but on the "effective teaching", usually called "teaching behaviours". Several research reviews on effective teaching (see a.o. Rosenshine and Furst, 1971; Rosenshine, 1971; 1976) had revealed several forms of effective teaching behaviours which were important to improve certain learning outcomes. Based on the above in the context of the Distance Learning System the following hypothesis is tested:

H_6 : There are significant correlations between specific tutoring behaviours and attendance at tutorials, satisfaction and positive perception towards tutorial services and results of end of semester examination.

Tutorial behaviours are defined by using several indicators:

1. Discuss module outlines.
2. Identify important points.
3. Write a resume of material in the module.
4. Show an effective independent study.
5. Discuss intensively.
6. Discuss administrative, academic and student affairs.
7. Discuss errors in the content of modules.
8. Encourage learning.
9. Discuss test/examination items.

UT students may face many problems: personal, social, psychological,

economical,oracademical. These problems may directly or indirectly affect the students' learning outcomes. It is therefore interesting to test the hypothesis below:

H_7 : A lesser degree of problems faced by UT students may increase their attendance at tutorials, improve their satisfactions and perceptions towards tutorial services and gain better results of end of semester examination.

The problems meant include:

1. A feeling of remoteness.
2. Problems concerning studying independently.
3. Far from tutor and home.
4. Inadequate information about UT.
5. A feeling of being too old.
6. Problems in seeing any progress in his study.
7. Problems in participating in study groups.
8. Financial problems.
9. Irrelevant background.
10. Constraints caused by his work.
11. Problems in communicating with UT Regional Centers.
12. Family problems.

Finally, it would probably be interesting to test the correlation betweencriterion variables. It is logical to assume that those who find tutorial services satisfactory will often attend them and improve their results at the end of semester examination. If so, the last hypothesis in this study is:

H_8 : There are significance and positive correlations between satisfaction towards tutorials, attendance at tutorials, and results of end semester examination.

The explanation regarding the criterion variables in H_8 has been given previously.

Chapter III

METHODOLOGY

Concerning methodology, there are three things to be reported. First, about the research instruments used; second, about research samples; third, about data collection.

3.1 Instruments

In a more complete study six research instruments have been used:

3.1.1. Questionnaire for students (M_1)

This questonnaire is meant to collect data about the background of the students, reasons why they enter UT, accessibility to tutorial locations, perception of students about their readiness in attending tutorials and their opinion about tutors/tutorials, their reasons to attend tutorials and the problems they face as UT students. Apart from that, through this questionnaire, data are collected on extra tutorials and involvement of the students in study groups. The questionnaire consists of 59 items and is in general in a structured and precoded format to simplify analysis. This questionnaire brought about 156 variables.

3.1.2. Satisfaction Scales (M_2)

The scales used in this study are the Likert's type scale meant to collect data about tutorial services in general and consists of 50 items (see Subandijo, 1986).

3.1.3. Questionnaire for Management (U_1)

This questionnaire is given to managers of Regional Centers to get data related to management aspects; ways to recruit tutors, arrange schedules, communication procedure between Regional Centers-Tutors-Students, forms of services given to Regional Centers and students specially study groups and coordination efforts by the Regional Centers with institutions/universities in the region. This questionnaire consists of 18 items, in general in a structured and precoded format to simplify data processes. This questionnaire brought about 65 variables.

3.1.4 Format to be filled by Administrators (U_2)

This format consists of three tables given to the Regional Center Administrators to be completed in connection with the data of students' attendance in English Language tutorial (Study Program of Economics and Development Studies), or Mathematics (Study Program of Aaplied Statistics). In addition this format is also meant to collect data on qualification of tutors and facilities as well as equipment in the Regional Centers. There were 22 variables derived from the tables.

3.1.5 Questionnaire for Tutors (T_1)

This questionnaire is given to tutors of English and Mathematics to collect data on tutor's background, his perception and opinion on UT strudents, modules and tutorials themselves and forms of services they acquired from the Regional Centers. In addition, it also helps to know what tutorial activities they carry out, the problems they face and their perception about

problems faced by the Regional Centers. This questionnaire consists of 41 items and are generally in a structured and precoded formats. This questionnaire brought about 73 variables.

3.1.6 Observation Format

This format is developed to measure the process variables in tutorial classes, especially those related to what is done by a tutor when he gives English Language or Mathematics tutorials. In brief this observation format is meant to collect data on:

a. What is the content/objective of tutorials?
b. What is done by a tutor to achieve the objective?
c. What teaching aids are used by the tutors?
d. How is the tutorial class quality?
e. Are tutorials given in class, in small groups, or in other forms of context?

This observation format including a combination between "Sign System" and "Category System" (Loyola, 1977), consists of units showing behaviours or specific events to be coded and also how many times they appeared in one period of time. This observation format brought about 36 variables.

All instruments mentioned above have been previously tested in the Regional Centers of Jakarta, Bogor and Solo before they were used in the actual study. Especially about the development process of the Satisfaction Scales (M_2) there is detailed report in Subandijo (1986).

Field workers were also trained so that they became familiar with all aspects of work in the field. It should be repeated here that this report is part of the study result of stage II and what is reported now is only based on the data collected through instruments 3.1.1. and 3.1.2., namely Questionnaire for Students (M_1) and Satisfaction Scale (M_2).

3.2 Sample

This study involves 12 Regional Centers among others 32 Regional Centers all over Indonesia. Only UT students of Academic year 1984/1985, registered at the study program of Economics and Development Study and Applied Statistics who take English Language and Mathematics are involved. The 12 Regional Centers were selected based on the number of students, so that Regional Centers can be categorized in two Large, Medium and Small Regional Centers as shown in table 1 (see appendix).

The table above also shows that the students selected as samples make up 11% of the population, and are then proportionally distributed according to the number of students in each sample units. Tutors involved in the study are all tutors in the sample units who teach English and Mathematics in Semester III, for the previously mentioned study programmes.

3.3 Data Collection

Data collection is done by central and regional field workers who have been trained. The regional field workers were some lecturers or non-UT senior students that were not involved in the organization and activities of the Regional Centers. There were selected on the basis of

their educational background relevant to course, included in the study, English and Mathematics.

All instruments, except the Observation Format were administered at the time the last session of Semester III tutorials was going on. There were three tutorial sessions in each semester: tutorial I, II and III. Class observations were done at tutorial II and III; tutorial II was entirely done by field workers of the region while tutorial III was done by regional and central fieldworkers together. Each observation lasted for an average of 110 minutes. See Aria Djalil et al. (1985) for a detailed report on the process of data collection.

Chapter IV

DATA PROCESSING, REDUCTION AND ANALYSIS

This part will mainly report how the data processing was done; editing procedure, tabulating and scoring of data in formats that simplified statistical analyses. It also presents the reduction of data, reasons, steps and statistical analysis procedures used especially in grouping the student variables from questionnaire M_1 and M_2, and hence made possible to reduce the variables into manageable number for further analysis.

4.1. Data Process and Reduction

In line with the scope of the report the analysis was focused only on the data collected through the Students' Questionnaire (M_1) and Satisfaction Scale (M_2).

After the coding scheme was completed, all M_1 and M_2 were transferred into data sheets and then keyed into the computer at the UT Research Center. The M_1 and M_2 data were processed in separate files. Until this stage, as previously reported there were 165 variables from the M_1 Questionnaire, certainly a number that was too large to be analized correlationally. This number had to be reduced to a manageable number. The way to reduce it was first to see consistency between two or more items (nested items) or items with blank responses. Observation was also made of the results of descriptive statistics; means, standard deviation, skewness and curtosis as well as the score distribution pattern of each variable. Items with inconsistent answers or blanks responses were

automatically eliminated or considered missing data. Several variables were combined if this combination produced a new and more meaningful variable. Several variables were converted into categorical variables after their distribution pattern was examined. Theoritical and conceptual based were also performed in reducing the variables; if after careful observation and reconsideration there were variables which were theoritically and conceptually difficult to explain, these variables were eliminated also in further analysis.

Through reduction and combination procedures as mentioned above, the number of M_1 variables had at this stage been reduced to 60 variables. Table 2 in the appendix shows these variables in detail.

The variables in Table 2 were used to report descriptive findings. Nevertheless, if further analysis was to be made, the number of variables should be reduced and combined in an even more complex way, for example by performing Factor Analysis. Because data aquired through M_2 was used as dependent variables, an easier and more practical way to reduce them was simply to count the total score of all M_2 items.

4.2 Data Analysis

There were basically two forms of data analysis used in the study, descriptive and correlational analyses. The first analysis results were used to write a report with respect to the frequency distribution, means and standard deviation of several variables considered important. The second was the correlational analysis which in this case the Pearson Product Moment Correlation (PPMC)

was performed to test hypotheses 1 to 8.

There were 50 independent variables divided into 7 groups:

1. Students' background 9 variables
2. Motif of entering UT 9 variables
3. Motif of participating in tutorials 8 variables
4. Ease of access to tutorials 2 variables
5. Preparation before attending tutorials 1 variable
6. Tutoring behaviours 9 variables
7. Students' problems 12 variables

Dependent variables consisted of:

1. PUAS 1 was a combined variable consisting of:
   1.1 V62 Ability to get the essence of tutorials
   1.2 V63 Attractiveness of presentation by tutor
   1.3 V64 Advantages of tutorials
2. PUAS 2 was the total score of the satisfaction scales (M_2)
3. NIPAR was the combined variable consisting of the number of times attending tutorials 1, 2 and 3 in Semester III.
4. ACHIEV were scores of the final examination of semester III in English Language and Mathematics.

The correlation matrices were produced using a the SPSS Program (Nie, at al, 1975). Since the study has newly underway in Indonesian distance education, the probability levels for the rejection of the null hypotheses corresponding to the hypotheses formulated in the study were set at .05 or less. The result of PPMC might also be interesting if to be used to analize the relationship between a dependent or criterion variables, i.e., PUAS1, PUAS2,

NIPAR and ACHIEV with a set of independent or predictor variables as mentioned previously. Regression analysis was performed in this respect. To use a proper regression analysis, the variables had to be reduced again to a manageable number, and hence, made suitable for the analysis and to raise F ratio (see Amick and Walberg, 1975). For data reduction at this stage, Factor Analysis was used for each group of independent variables. The result of this factor analysis was used to build composite scales. Factor scores for the individual data cases were calculated from the factor score coefficient matrix. Subsequently, the completion estimation method (Nie, 1975, p.488) was used to build factor scales. The scales were created for English and Mathematics separately, before regression analysis was employed. Group membership (large, medium and small Regional Centers) was also included in the regression equation to predict learning outcomes. Further description about how the factor analysis and regression analysis were used in the study is found in Chapter V.

Chapter V

R E S U L T S

This chapter presents, first, a description of the students, tutors and tutorials, formal and extra tutorials, study groups, and Regional Centres, and then findings regarding the correlational study specific to the hypotheses being tested. The final part of the chapter also presents the results of regression analyses.

5.1 Descriptive Findings

It is expected that this part might be helpful for the readers to obtain general pictures of the research findings. The distribution and means of the data with respect to the students, tutors, Regional Centers and tutorials are reported.

5.1.1 Students and tutorials

A brief description is presented here regarding the student characteristics, and backgrounds, and other information relating to their perception toward tutors and tutorials.

a. Student backgrounds

The students ranged in age from 18 to 59, with a mean age of 29.0 and a mode of 21. A majority were male (78%). About half of students were married. With respect to employment, nearly 75% were employed. About 64% were employed in public sectors, 31% in private sectors, and 5% were self employed. Their average income was about $90.00 permonth

and it ranged from $10.00 to $500.00 permonth; 63.40% reported their income of less than $100.00; 32.30% between $100.00 and $250.00; and 4.30% earned $250.00 or more.

Regarding the educational attaintment, 59.40% had general secondary high school (SHS) certificates, 18% had technical SHS certificates, 10% had economic SHS certifacates, and the rest had other vocational SHS certificates. Furthermore, about 46.00% had attended other universities. Interestingly, 3% had completed 4-5 years of university, 22% had earned bachelor degree. Till the end of Third Semester, 5.40% of students were still actively attended/registered at both UT and other public or private universities.

b. Factors motivating enrollment in UT

There were some factors motivating students to enroll in UT. The two most common reasons or motivation were to active one's mind (90%) and to further study some courses in more intensively (80%).

c. Factors motivating tutorial attendance

There were four most common reasons to attend tutorial session: 1) asking difficulties relevant to the course being studied (97%); 2) enriching knowledge (95%); 3) increasing motivation to learn (94%); and 4) getting helps in solving problems identified in modules (93%).

d. Ease access to tutorial centres

The distance from tutorial centre ranged from less than one kilometres to 400 kilometres. Various time spent to come to tutorial centres ranged from less than one hour to 36 hours, with a meant time

spent of one and half hours.

e. Preparation before attending tutorial

It was reported that only 13 percent of respondents had read the modules before they attended tutorials. The rest of them were either only had read the modules partly or not at all. There were four most common reasons why they did not read the modules before they came to tutorials: 1) modules were too difficult to comprehend (68%); 2) work related problems such as travelling, irregular working hours, overtime, etc. (56%); 3) did not have time for the study (41%); and 4) felt not being able to be self sufficient learners (38%).

f. Tutoring behaviours

There were three important tutoring behaviours but not frequently demontrated by tutors: 1) discussed previous test/examination items (28%); 2) identified important points of the modules (35%); and 3) summarized learning material (40%). Instead, they discussed relatively more often the outline of modules (76%), and revised errors (presumably typing errors) identified in the modules (57%).

g. Informal contact with tutors

In general tutors offer assistance outside the tutorial hours (56%), but students do not take much advantage of it.

There are other ways that students use to contact the tutors, i.e : they came straight to the tutor (58.3%), write the tutor (31.7%) and call the tutor (10%).

Tutors who are contacted outside tutorial hours usually give prompt

response (65.4%), 27.5% kept the students waiting and only 7,1% did not give any responce.

h. Problems faced by UT students

There are problems and constraints that UT students face, namely :

1. They live far from the units and tutors (25,6%).
2. They cannot join study groups.
3. They cannot imagine the progress achived (10,6%)
4. They cannot leave their job (9,7%)
5. They cannot work independently (7,4%)
6. Financial problems (7%)
7. Other problems

5.1.2. Tutor and tutorials

a. Tutor's background

1) Genetic and social

The average age is 45 years, the youngest tutors are 26 years old (6.9%) and the oldest 53 years old (13.8%).

There are more male than female tutors. There are 70.6% of the English language tutors are men, the rest are women. In the sample of this research all mathematics tutors are men.

All tutors are mainly lecturers. As many as 44.8% have part time jobs.

2) Academic experience

The highest degree of the tutors is S_1 (79.3%), 17.3% have an S2 while only 3.4% have a doctor's degree.

Lecturers of the English language are in general also lectures of English at their almamater (88.2%), the same holds true for lecturers of Mathematics (91.7%), the rest are lecturers of other subject matters. While 32.1% teach at other Universities.

Lecturers of English have an average experience of 11 years, 6.9% have an experience of 30 years, while 41.4% have just started teaching English.

Lecturers of Mathematics have an average experience of 6 years, 3.4% have an experience of at the most 25 years, while more than half of them (55.2%) have no experience yet or have just started teaching Mathematics.

b. Tutor's opinion about students, modules and tutorials

Tutors in general find that Ut students have a very heterogenesus background (86.2%). Students do not take good advantage of tutorials (89.7%); only 10.3% take good advantage of tutorials.

Most of the students (71.4%) do not prepare themselves for the tutorials, only 28.6% come to tutorials well prepared. As for expressing their opinion and asking questions as many as 55.2% of the students do not dare to express their opinion, 58.6% do not know how to select good questions. In this connection 58.6% of the students are not able yet to apply independent study.

The academic ability of UT students according to the tutors (48.3%)

is the same as that of students of other universities.

Part of the tutors (51.7%) are of the opinion that the module materials are too heavy for the students, while another part of the tutors (48.3%) do not think so.

There are 67.9% of the tutors think that tutorials should be compulsory for UT students, while others do not agree with this opinion.

In general tutors have no problems with the schedule made by the Units. Only 10.3% of the tutors find difficulties with the schedule made by the tutors.

Part of the tutors (58.6%) find the tutorial schedules inadequate, the rest of the tutors find the tutorial schedules adequate.

Almost all tutors (86.2%) think that UT students still need extra tutorials while the rest of the tutors (13.8%) think that UT students do not need extra tutorials.

c. Services of the Units to the tutors

Most of the tutors (86.2%) have ever had clear guidelines about their tasks from the Regional Centre and only 13.8% never had any guidelines from the Regional Centre.

Materials given by the Regional Centre to the tutors are: subject matter materials, tutor's manual, information booklets on UT. Only a small number of tutors received a course outline/syllabus/curriculum and other references from the Regional Centre. Not one tutor has received feedback like examination results or student's achievement of past semesters.

There are 48.3% of the tutors find the tutorial honorarium

adequate. 41.4% find the tutorial honorarium not very adequate, while the rest of the tutors (10.3%) find the tutorial honorarium inadequate.

d. Tutorial Activities

Senior students are never involved/take part in tutorial activities. So tutorial activities are only done by the tutors.

Most frequent tutorial activities are :

1. Discuss the outline of the module.
2. Give motivation to increase learning spirit.
3. Show an effective way to independent learning.
4. Intensive question and answer activities.
5. Discuss/correct mistakes and errors in modules.

In tutorial activities tutorials have never discuss academic administrative matters.

e. Problems faced by tutors

Most of the tutors are full time university lecturers. Tutorials as at side job, so most tutors (89.7%) do not find that tutorials disturb their main task, while only 10.3% think tutorials disturb their main task.

If the content of the module material is against the tutor's opinion tutors tend to present material that they think is good and correct the content/material in the module.

Almost none of the tutors (93.0%) find it difficult to get the

important points from the module material, and only 6.9% often find problems in getting important points from the module.

Athough in tutorials students never ask questions, they are still held by way of encouraging students to ask, explanning the material of the module and asking questions.

In general, tutors have no problems in adapting themselves to the UT learning system (read: tutorial).

Most of the tutors 66.7% get the opportunity to give extra tutorials while 33.3% do not get any opportunity.

f. Tutor's opinion about problems of the Regional Centre

Part of the tutor (37.5%) are of the opinion that units have problems in recruiting or getting tutors. These problems generally are concerned with : tutors are part time employees, procedure of recruiting tutors, or functional position, the honorarium is in adequate, and a tutor's status is considered lower than that of a lecturer.

5.1.3 . The Units and Tutorials

1. Tutorials Schedule

The Units generally give tutorials on Sunday (66.7%), While 33.3% give tutorias on other days.

1) Considerations to make a tutorial schedule.

There are several factors that are considered important to

determine the tutorial schedules, they include :

Available space (classroom), tutor's suggestion, decision of the managment, and the wish of most of the students. While the socia-cultural factors is not very important according to part of the Regional Centre (50%).

2) Publications of schedule.

All Regional Centre make use f the announcement board available at the Regional Centre offices to publish the tutorial schedule. Almost all Regional Centre make use of the radio to announces the tutorial schedules. Only 9.1% of the Regional Centre do not make use of the radio. The printed media (newspaper) is also used by the Regional Centre (63.6%). Only 36.4% of the Regional Centre make use of television. Other media often used by the Regional Centre opproximately 55% are post office and announcements to students or study groups.

b. Increase of tutor's knowledge

Most of the Regional Centre (72.7%) have never given any special upgrading courses for the tutors. Only 27.3% have done so. The courses use mostly the face to face method for both English Language and Mathematics. The courses include : explanation of the material/content of modules, tutorial technique, and guidance in learning as well as administration.

More than half of the Regional Centre (63.6%) have never met tutors for the relevant subject matter. The meeting with tutors is meant to : get an agreement between material/content of module, discuss the

material of the module, discuss the strategy of the tutorials, and devide the time to implement tutorials.

c. Tutorial systems

In general one tutor manages one tutorial class, both for the English language as well as Mathematics. Whereas there is only 30% of the Regional Centre that organize "team teaching".

d. Study groups.

There are study groups in all Regional Centre formed on the initiate and wish of the student themselves. The procedure of forming study groups is mostly done by the Regional Centre (60%), while 40% is done by the students.

The main assistance given by the Regional Centre to the study groups concern academic and administrative matters. Technical assistance range from counseling (tutor), supplying space and other equipment.

e. Cooperation with other instances

All the Regional Centre always try to establish cooperation with other instances, like post office, telecomunication offices and offices of The Ministry of Education and Culture. As many as 66.7% of the Regional Centre cooperate with Regional Government, District Government, Ministry of Information and Defence and Security.

5.1.4 . Extra Tutorials

There were 25.65% of the UT students participate in extra tutorials. In general extra tutorials are organized by the students themselves (47.0%) and individually (40.0%). Other tutorials are organized by a foundation or by certain institutes.

There are several factors that encourage students to participate in extra tutorials :

1. The limited tutorial time available through the units (UPBJJ) (94.5%).
2. The desire to understand and master module materials faster (93.5%).
3. The module materials are difficult (90,8%).
4. Unsatisfactory service by the Regional Centre (40,2%). The tutors in these extra tutorials are :
   - University lecturers who are not tutors of the units.
   - Tutor of the units.
   - UT students.
   - Non UT students.
   - Employees of an office.

The frequency of extra tutorial attendance range from once to 40 times during semester III. On the average students attend nine extra tutorials in semester III (43.4%).

Students attend an average of two hours of a range of 1 - 9 hours each time.

The fee also varies greatly from only Rp 500,00 per month up to Rp75.000,00 a month. Most students (26.7%) pay Rp 5.000,00 a month.

5.1.5. Study groups

a. Initiative and membership

The initiative to form study groups came from the students themselves (96.8%) and from units and tutors.

More than half of the number of students (52.5%) are members of study groups. Group members vary from 2 (1%) members in one group to 50 (1%). Most groups consist of 5 to 10 students (49.7%).

b. Activities of student groups

The main objective of the student groups is to increase the knowledge and skills of the members. The activities include :

1. Discuss module materials.
2. Make unit tests.
3. Discuss exercises.
4. Exchange information.

Study group activities range from 1 to 5 hours, with a frequency of 2 hours each time (61.1%).

c. Resource person

The resource persons or main supervisors in a study group are the members of the group themselves (54.6%), lecturers from public and private universities (20.9%) and tutors from the units (15,6%) as well as non-UT students and other resource persons.

There are some quite important reasons for a student not to become a member of a study group :

1. It is far from the place where he lives (32.9%)>
2. He prefers to study alone (23.3%).
3. He has no time (21.4%).
4. There is guidance from the units (10.9%).
5. Others

5.1.6 Classroom observation.

In this study 47 observation formats have been collected; 26 English Language classes and 21 Mathematics classes. Because tutorial periods differ in length, the time unit had to be standardized first to calculate the interaction unit. So the tutorial time was converted into 120 minutes (2hours) standard. Proportionally the frequency in classes of less than 120 minutes can be calculated as follows :

$$F = \frac{W}{120} f$$

Where : W = real tutorial time.

f = Frequency of W time.

F = Frequency in 120 minutes.

The table 16 in the appendix shows the descriptive statistics of all component of activities observed.

5.1.7 Learning Outcomes.

There are four variables that can be classified as learning outcomes in this study; they are PUAS1, PUAS2, NILAIPAR and ACH. PUAS1 is a combination of the M_1INTI (V62) variable,which is the students

ability to get the essence of the material explained by the tutor, the M1TSERV (V63) variable, which is the students evaluation of the tutor's presentation of the material, and the M1MAN (V64) variable, which in the advantage of tutorials for the students. From this combination a new scale was produced. i.e 3 - 13. Computation showed that this mean variable is 6.08 with a standard deviation of 1.50. The maximum score achieved is 10, three points below the maximum score that could have been achieved. Only 3 students or 0.7% achieved this score. On the other hand, 19 or 4.6% of the students got the lowest score of 3. PUAS2 is the total score of the attitude scale or the students satisfaction on tutorials, taken from the M_2 questionnaire. This score was calculated by adding the student's score for each item in the questionnaire (50 items) so that the lowest possible score was 50, while the highest was 250 with the understanding that the students answered all the questions. For several reasons not every student answered each question so that there were scores below the minimum.

We must be careful here when further analysis is done. The computation results available show that the mean score of PUAS2 is 160.83 with a standard deviation of 19.74. The minimum score was 107 and the maximum score 218. There were 8 students highest in the Samarinda (163.92) and in the Yogyakarta (163.21), while the lowest mean score was found in the Manado (156.09) and the Ambon (156.00).

For the ACH variable, for the English language as well as Mathematics the highest possible score was 100. For English, the score for 270 students was 39.53 with a standard deviation of 10.85. The minimun score was 10.41 and the maximum score was 76.07. For Mathematics The mean score for 195 students was 48.26 with a standard deviation of

11.34. The lowest score was 16.88 and the maximum score 75.35. The table below shows a distribution of student's scores of this study.

Table 17. Examination scores for English and Mathematics.

	English	Mathematics
<50	82.6%	54.4%
50 - 59	13.3%	29.7%
60 - 69	2.6%	14.4%
70 - 79	1.5%	1.5%

5.2. Correlational Findings

This part of the report is focused on testing Hypothesis 1 to Hypothesis 8. As described before, there were 50 variables selected as the result or stage one data reduction procedure. Six set of correlation matrices (Pearson Product Moment Correlation) were produced using SPSS programme and used to test the hypotheses. Each of correlation matrix included a group of independent variables, group membership (large, medium and small Regional Centres), subject matters (English and Mathematics), and a group of dependent variables. Table 3 to 8 in the appendix present the results.

5.2.1. Hypothesis 1

H_1 : The backgrounds of UT students correlate positively and significantly with their learning achievement.

Table 9 below summarizes the correlational findings in relation to Hypothesis 1

TABLE 9. CORRELATIONS BETWEEN STUDENT BACKGROUND VARIABLES AND STUDENT LEARNING OUTCOMES

	PUAS1	NIPAR	ACHIEV	PUAS2
V04 M1AGE	-	-	-	.08
V06 M1MAR	-	-.09	-	-
V09 M1JOB	.21	-	-	-
V15 M1INCOME	-	-.11	-	-
V20 M1SCHO	.08	-	.11	-
V24 M1READ	.09	-	-	-

From Table 9 it can be seen that among nine students background variables, there are five variables significantly related to one or more student learning outcomes :

a. The students who employed, had ever attended other universities, and red relevant materials more often were more satisfied with the tutorials because they felt they were able to make an abstract of tutor's explanation, the way the materials presented were interesting, and tutorials were useful to improve their knowledge and skills.

b. The marital status and income were negatively related attendance rate; those who were married and had higher income did not attend tutorial very often.

c. Those who had attended other universities seemed to have higher examination scores.

d. Older students were inclined to be more satisfied with tutorial services in general.

Hence it can be concluded that H_1, to some extent, was supported by the data.

5.2.2. Hypothesis 2

H_2 : Reasons that made them become UT students may affect significantly their attendance at tutorials, level of satisfaction, perception and result of the end of semester examination.

The following table condenses the findings from wich whether or not H2 would be fully or partly supported by the data.

TABLE 10. CORRELATION BETWEEN MOTIVATION BECOME UT'S STUDENT AND LEARNING OUTCOMES

		PUAS1	NIPAR	ACHIEV	PUAS2
V146	M1CAR1	.09	-	-	-
V148	M1CAR2	-	-	.15	-
V149	M1ACTIV	.13	-	.08	-
V151	M1STU	.09	-	-	-
V152	M1LEV	-	-.14	-	.09
V153	M1FRIE	-	-	.12	-.17
V154	M1FILOT	-	-.08	-	-

Table 10 provides evidence that some motivational variables activating student to become the students of Universitas Terbuka had significantly correlated with their learning outcomes.

a. The students who wanted to develop their future careers, activate their minds, and to study specific subjects more intensively were more satisfied with the tutorials because they felt they were able to abstract tutor's explanation, the way the materials presented were interesting, and tutorials were useful to improve their knowledge and skills.

b. Being a student of UT inorder to get promotion and just to kill the time while waiting to enroll to other university turn out to be good reasons to promote attendance rate.

c. Being not accepted by other universities was inclined to hinder students from learning more seriously, and hence, gained lower marks. This seemed to be logical if those who were not admitted at conventional universities would also be due to naturally less motivated students, hence, failed in University Entrance Examination. Nevertheless, in order to activate one's mind was significant to get better examination scores. As it was expected that students whose reason to enroll to UT was to get more friends were inclined to gain lower examination result.

d. The students whose reason to enroll to UT was to get more friends did achieve their objective; they were more satisfied with tutorial services in general. However, the students who wanted to get higher rank or salary were not satisfied with tutorial services in general.

Thus, it can be concluded that H_2 was partly supported by the data.

5.2.3. Hypothesis 3

H_3 : Reasons that push students to attend tutorials correlate positively and significantly with their degree of attendance in tutorials, level of satisfaction, perception and the result of their examination.

To test the above hypothesis, the data is presented on the following table.

TABLE 11. CORRELATIONS BETWEEN REASONS TO ATTEND TUTORIALS AND STUDENT LEARNING OUTCOMES

		PUAS1	NIPAR	ACHIEV	PUAS2
V29	M1DIR	-	-	-.10	-
V30	M1KNOW	-	.10	-	-
V31	M1DIF	.12	-	-	-
V32	M1SOUL	.22	.12	-	-
V33	M1SELF	.11	-	-.16	-
V34	M1TIME	-.11	-	-	-
V35	M1DUTY	-	-	-.16	-
V36	M1RICH	-	.18	-	-

The above table reveals evidence that although not all, but some variables indicating reasons to attend the tutorial sessions were significantly related to one more student learning outcomes.

a. The students whose reasons were to ask difficulties relevant to study, inclined to increase learning motivation, wanted to know how to study individually, and not to simply kill the time seemed to be more satisfied with the tutorials; they felt they were able to abstract tutor's explanation, the way the tutorial presented was interesting and the tutorials were useful to facilitate their knowledge and skills.

b. There were reasons such as ; the students should know each other, increasing learning motivation, and enriching knowledge which had significant effects on attendance rate; student with these reason were inclined to attend tutorials more often.

c. However, those whose reasons to attend tutorials were; to get description about UT/Regional Centre, wish to know how to be self sufficient learner, and because the tutorial was not compulsory were inclined to have been less successful in examination.

d. Surprisingly, non of the reasons to attend tutorial was significantly related to $PUAS_2$, that is, satisfaction toward tutorial services in general.

We can then conclude that H_3 was not fully rejected.

5.2.4 Hypothesis 4

H_4 : There are significant correlations between the long distance and the time spent, and the decrease of attendance in tutorials, the growth of dissatisfaction and negative perception toward tutorials and then a tendency to have a negative effect towards the result of the students' end of semester examination.

The study involved only two variables measuring the degree of ease access to tutorial. From table 4 in the appendix it was found that long distance and long time did not hinder students from attending tutorials. Rather, the problems relating to the distance and time needed to come to tutorial being chalanges for some students to attend tutorial sessions more often. The time spent to come to tutorial was positively and significantly related to $PUAS_1$, but not to $PUAS_2$.

In short, H_4 was fully rejected.

5.2.5 Hypothesis 5

H_5 : There are positive and significant correlations between reading the module first before it is discussed in tutorial , and attendance at tutorials, satisfaction and positive perception, and the result of the end of semester examination.

The more time a pupil spent in studying relevant materials, the more likely s/he would succeed in mastering that materials. Paralel to this, the more a student of UT made a proper preparation before s/he attended tutorial, the more likely s/he would gain better learning outcomes. Indeed, the study revealed such evidence; the students who learned the module before it was discussed in tutorial session demonstrated positive effects on learning outcomes. The variable which measured whether the students learned the module before they came to tutorial correlated positively and significantly with student satisfaction, attendance rate, and examination scores. It was also significantly related to $PUAS_2$, as an indicator of student satisfaction toward tutorial services in general. Therefore, H5 was fully supported by the data (see Table 4, in the appendix).

5.2.6 Hypothesis 6

H_6 : There are significant correlations between tutoring behaviours and attendance at tutorials, satisfaction and

positive perception towards tutorial services and results of the end of semester examination.

This hypothesis presumably be very interesting for those who believe that teacher or tutor significantly shares variance in explaining differences in student learning outcomes. Tabel 12 is presented to test such hypothesis.

TABLE 12. CORRELATIONS BETWEEN TUTORING BEHAVIOURS AND STUDENT LEARNING OUTCOMES

		PUAS1	NIPAR	ACHIEV	PUAS2
V52	M1MOD	.20	.11	-.12	.12
V53	M11DEN	-	-	-.14	.09
V54	M1RESU	.19	-	-	.13
V55	M1LEF	-	-	-.18	.19
V56	M1QAIN	.31	-	-	.20
V57	M1ADM	-	-.11	-.19	.08
V58	M1MIST	.10	-	-	.13
V60	M1MOST	.14	-	-.17	.09
V61	M1TEST	.11	-	-.12	.23

As it can be seen, there were nine tutoring behaviours included in te study where some of them were significantly related to one or more student learning outcomes. Six out of nine tutoring behaviours were significantly related to $PUAS_1$, student satisfaction. Although only two variables significantly correlated with attendance rate, there were also six variables significantly but negatively related to examination scores. To our surprise, all the nine tutoring behaviour variables

positively and significantly correlated with $PUAS_2$, student satisfaction toward tutorial in general.

a. Tutor who discussed the outline of module, made a summary of the module content, did question-answer type of student-tutor interactions, discussed the errors indentified in the modules, motivated students to learn seriously, and discussed the test items were inclined to have positive effects on $PUAS_1$; students felt they were able to abstract tutors' explanation, the way the materials presented was interesting, and tutorials were useful to enhance their knowledge and skills.

b. Tutors who were inclined to outlining content of module while tutoring, attracted students to attend tutorials more often. As it was expected, those who included administrative related matters in their tutoring, resulted in lower student attendance rate.

c. Tutors who often discussed the outline of modules and effective methods of being self sufficient learner, talked about administrative matters and motivating students to learn seriously, brought negative effects on student examination scores. Interestingly, however, a tutor who often helped students to identify important parts of module content and who discussed the previous test items did not bring positive effect on student achievement. It should be noted, the students were simply asked how often their tutors helped them to identify important parts of modules and discuss the previous test items. We did not know, however, how good these matters being identified and discussed. Perhaps, the qualities of identifying

and discussing the above issues that to have been more important than how often the issues were identified and discussed.

d. All tutoring behaviours variables correlated positively and significantly with $PUAS_2$ which meant that the tutors who demonstrated all the behaviours included in the study more often had a tendency to improve student satisfaction toward tutorial services in general.

Having discussed the findings presented in Table 12, it can be concluded that H_6 was partly accepted and partly rejected.

5.2.7 Hypothesis 7

H_7 : A lesser degree problem faced by UT students may increase their attendance at tutorials, improve their satisfaction and perception towards tutorial services and gain better results of end of semester examination.

The following table shows correlations between student difficulties and student learning outcomes.

TABLE 13. CORRELATIONS BETWEEN STUDENT DIFFICULTIES AND STUDENT LEARNING OUTCOMES

		PUAS1	NIPAR	ACHIEV	PUAS2
V130	M1REM	.11	-	-	.13
V131	M1DIFS	.12	-	.12	-
V132	M1DISTH	.13	-	-	-
V133	M1EXUT	.21	-	-	.11
V134	M1OLD	.11	-	-	-
V135	M1DIPROG	.15	-	-	.12
V136	M1DIACT	.14	-	.16	-
V137	M1DIMON	-	-	.10	-
V138	M1BACK	.09	-	.13	-
V139	M1JOB	-	.19	-	-
V140	M1DICOM	-	-	-	.08
V141	MIDIFAN	-	.08	-	-

The table indicates that out of 12 variables relating to student difficulties, there were 9 of them related to $PUAS_1$, and 4 variables were related to ACHIEVEMENT and $PUAS_2$, and only 2 variables correlated with NIPAR.

a. Those who had no problem or were able to overcome their problems of feeling isolated, difficult to be self sufficient learners, living far away from tutorial centre, having insufficient information about UT, feeling to old, having difficulties in obtaining information about their academic progress, difficulties in participating in study group, and having educational background of bellow standard, seemed to be

more satisfied with the tutorial.

b. However, only those who had no problem or were able to cope with employment and family related problems indicated higher attendance rate.

c. Subsequently, there was data supporting that higher examination scores had something to do with a lesser problem encountered by students. Those who were able to cope with problems of feeling difficult to be self sufficient learners, difficulty in participating in study group, financial related matters, and having educational background of below standard were relatively to have more opportunities to gain better examination result.

d. Finally, the students who had no problem or succesfully coped with the problems of feeling isolated, not having adequate information about UT, difficulty in knowing their academic progress and difficulty in communicating with Regional Centre indicated to be highly satisfied with tutorial services in general.

It can be concluded, H_7 was generally supported by the data.

5.2.8 Hypothesis 8

H_8 : There are significant and positively correlations between satisfaction towards tutorials and result of end of semester examination.

As can be seen from table 8 in the appendix, although not very high, significant correlations among $PUAS_1$, NIPAR and ACHIEVE were found. Student who were satisfied with the tutorial had a tendency to attend tutorials more often, and take advantages of gaining better examination scores. However, having satisfaction with tutorial services in general ($PUAS_2$) did not result in attending tutorial more often or obtaining higher examination scores. Therefore, H_8 was partly supported by the data.

5.3. Predicating Learning Outcomes

Although the correlational findings did not indicate a great support to do further analysis owing to very few high correlation between independent variables and the criterion variables were found, it might give us additional information if multiple regression was used to analyze the data. In doing so, it would be expected the results might help to improve methodology to be employed in further research of this area, especially in obtaining clearer explanation about factors affecting variations on student learning outcomes.

5.3.1 Constructing Predictor Variables

As it was described earlier in Chapter IV, there were six group of independent variables plus one single variable included in the study. They were grouped based on logically determined groupings of variables. It was considered that the variables in the group were not regarded as descrete and mutually exclusive ones. The variables within a category were also assumed to be substantially and highly correlated. Under the circumstances factor analysis would assist in data reduction, and subsequently would facilitate in creating factor scales to be used as predictors. Complete principal component solutions were used to build composite indices, and only those variables that loaded .40 or above on a factor were included in creating the scales.

The second run of complete principal component solution was used if, in any case, the first one resulted in one or more variables loaded less than .40 in a factor. The scales were created both for English and Mathematics classes separately, and hence, made possible to employ regression analyses for each subject.

5.3.2 Regression Analysis

Result of regression analyses were reported separately, first for English and second for Mathematics. Table 14 in the appendix summarizes the variables selected and finally used to create predictors of each subject.

a. Results for English

The combination of hierarchical and stepwise regression solutions were performed to predict student learning outcomes in English classes. The student characteristics predictor was entered first, and the student academic background predictor was entered second, assuming that their influence quite apart from what students would have when they enter into the world of UT. Hence, it was important to estimate their size of influence one after another before examining other effects. The other predictors were entered using stepwise inclusion and set at .05 percent statistical criterion.

Table 15a in the apendix summarized the findings of regression analyses for English.

1. PUAS1

As it can be seen from table 15a, the student characteristics (SCALE 1) on its own did not explain at all the variation in PUAS1. If the student academic backgrounds (SCALE 2) were included, they explained 3 percent (R=.17; F=3.21; p=.04) of PUAS2. Subsequently, the inclusion of the student difficulties (SCALE 6) into the regression equation increased the accuracy of prediction twice, although it was only 6 percent of PUAS1 variance was predictable on the bases of SCALES 1 & 2 and SCALE 6 (R=.25; F=4.64; p=.003).

2. PUAS2

It should be recalled again that PUAS2 was a general measure of

student satisfaction toward tutorial services in general, using Lykert type-scale. Noticing again Table 15a, only the student characteristics (SCALE 1) significantly predicted PUAS2, although only 2 percent of the variance of PUAS2 was accounted for by the scale (R=.14; F=4.57; p=.03).

3. NIPAR

The student characteristics and academic backgrounds (SCALES 1 & 2) were not significant predictors of attendance rate. However, with three other predictors; Regional Centre, motivation of attending tutorials, and V65= Reading modules before attending tutorials, 17 percent of the total variance of attendance rate was accounted for by these predictors (R=.41; F=8.70; p=.00)

4. ACHIEV

Only "The student difficulties (SCALE 6)" could be considered as a significant predictor of examination scores. Together with "The student background variables" (SCALES 1&2), only 5 percent of variance of examination scores was accounted for by the scales (R=.22; F=3.77; p=.01).

b.Result for Mathematics

The regression analysis procedures used for mathematics were similiar to those performed in predicting student learning outcomes for English classes. The result were presented on Table 15b (see apendix).

1) PUAS1

As can be seen from table 15b, non of predictors explained significantly the variation in PUAS1.

2) PUAS2

It turned out that student background variables (SCALES 1&2) did not at all explain the variation in PUAS2. However, the inclusion of "Tutoring behaviours (SCALE 5)" and "Motivation in attending tutorials (SCALE 4)" explain 10 percent of PUAS 2 variance (R=.33; F=4.95; p=.00).

3. NIPAR

Only Regional Centre could be considered as a good predictor of attendance rate; 11 percent of NIPAR variance was predictable on the basis of Regional Centre (R=.34; F=7.06; p=.00).

4. ACHIEV

Only two predictor,i.e.,"The student difficulties" (SCALE 6) and " Tutoring Behaviours " (SCALE 5) indicated as significant predictors; 15 percent of variance of examination scores was predictable on the basis of both scales (R=.38; F=6.86; p=.00)

Chapter VI

CONCLUSION AND DISCUSSION

In general, the hypotheses of the present study were supported by the data. The magnitude of correlations between independent and dependent variables, however, were relatively small. The simple highest correlation between independent and dependent variables obtained in the study was .31, that is, between V56-questioning and answering intensively with PUAS 1, which means that only 9 percent of variance in student participation was accounted for by V56. Most of independent variables correlated lower than .20 with one or more learning outcome variables.

As it was assumed, having one independent variable significantly correlated with one learning outcome did not necessarily correlate in the same way with another learning outcome; a particular independent variable was only important to facilitate a particular learning outcome, but not to the other ones. This was also the case with the present study. For example, the employed students were inclined to be more satisfied with tutorial, but they did not do any better or worst in examination compared to the unemployed students.

In another case, a particular independent variables significantly and positively correlated with a particular dependent variable, but conversly happened with other dependent variable; significant but with negative direction. For example, focussing tutoring programme on motivating students in order to study seriously was positively related to student satisfaction, but it was negatively related to student examination results; this tutoring behaviour was more productive of improving motivation but contra productive of student examination

scores.

Using regression analysis for which English language and Mathematics were treated separately, the results also indicated that different learning outcomes of different subject matters were accounted for by different set of predictors. The findings such as these were not incommon in research on teaching (see also Dunkin and Biddle, 1974; Rosenshine, 1971; Medley, 1929).

Now, let us further summarize and discuss the findings in a more descriptive form, and see whether or not we could learn from the present study, especially with respect to the improvement of our tutorial systems.

6.1 The student background seemed to be less important in explaining student learning outcome variation, especially with respect to student achievement. Only previous experience from attending other universities was slightly important to obtain higher examination scores. It was not known, however, how important the experience for further learning at UT, i.e., for the third and fourth years of study, etc. The finding such as this, that is, the UT student backgrounds were not important, might classify the issue raised by people that the heterogeneous of UT student background hindered students from getting higher achievement. The study did not support the issue.

Attending tutorial more often was inclined to be more important for unmarried and less income or unemployed students. Since marital status and employment were highly and positively related to age (r=.73 and .58 respectively), we might further conclude that attending tutorial more often might also be important for younger students. The finding

might suggest that providing tutorial of good quality would attract more younger students to attend tutorial. At the moment, only 20 percent of UT population are students with age of 22 or less. The government, on the other hand, strongly push UT to accomodate higher percentage of younger students in the system. The study done by Machfud (1987) revealed the reason; more than 84 percent of new graduates of Senior High School (SHS) did not enter UT because UT did not offer frequent and intensive face to face tutorial. Therefore, to attract more new graduates of SHS to enter UT should be part of UT policy; that is, to set up more adaptable tutorial systems for younger students.

In relation to student satisfaction, older and experienced students had more potentialities to take advantages of tutorial. This was paralel to the previous findings (Holmberg, 1982) that learning through distance education system was more suitable for older and experienced people. In other words, and paralel to the above suggestion, the tutorial systems implemented by UT/Regional Centers should be modified if younger and less experienced students were to be satisfied.

6.2 Different motivation to enter UT provided some interesting findings. One of them was: the students whose reason to enter UT was to get more friends had lower examination results. It was certainly logical to expect, since this motivation was far a part from academic related motivation. The finding only becomes important and meaningful if it is used to convince people that UT, which is like other conventional universities, is not a good place for students whose minds are not academically occupied. UT, on the other hand, needs, perhaps more serious and persevering students compared to conventional univesities

in order to become successful learners in distance education system. Therefore, there was no reason for us to believe, at the end, that a successful UT student should be rated as a second class graduate. Such information would be important to communicate to students and community, and included as one of information elements aimed at creating positive image and professional recognition (since many people still doubt the existence and the quality of UT).

To get promotion and kill the time while waiting for being admitted in other universities were only condusive reasons for attending tutorial more often but were not productive of achieving higher examination scores. The finding suggested that tutorial for students of this category seemed to be as leisure time activities. At the same time, however, reasons to enroll in UT which were; to develop their future careers, activate their minds, and to study subject more intensively were productive ones of obtaining satisfaction. In general, we might conclude that the existing tutorial programmes did not discourage people to enter UT, especially for older and experienced ones.

6.3 The reasons to attend tutorial appeared to have been in similar direction to those given in connection with reasons to enter UT. Those who had no or indirect academic related motifs such as; to get information about UT/Regional Center, and wish to know how to be self sufficient learner, did not perform well in the examination, while social and psychological motivation such as; student should know each other and to lift up learning motivation, did not move students to attend tutorial more often. The finding indicated, different reasons to attend tutorial brought different effects on particular learning

attend tutorial brought different effects on particular learning outcomes. This was to suggest again that variabilities in tutorial programmes and approaches are important to be available to students. And what is more important is that to examine thoroughly the overlapping and interrelationship between different approaches and then tointegrate their elements into possible tutorial model(s) to accomplish desirable effects on students' learning.

6.4 Once students had perceived that tutorial was important, the problems relating to long distance and time to come to tutorial center became irrelevant. Instead, these problems challenged them to cometo tutorial more often. Although the correlations between distance and time with examination scores were not strong and significant, but they indicated positive directions. The findings then raised the questions; how to convince students that tutorial is important, and how to run tutoring programmes which provide evidence to students that tutorial is really important. The questions such as these should be used as the guiding ones to improve the tutorial systems.

6.5 The most important single variable appeared in the study was "whether or not a student studied the module before it was discussed in tutorial session". This variable positively and significantly correlated with all criterion variables.It was quite logical, sensible and direct to suggest students in order to be academically well prepared before they come to tutorial session, because the more they read the module before it was taught, the greater the chance they performed and achieved well. It was found, however, less than 13 percent of students had read the modules before they came to tutorial

center.

6.6 One of the very basic research questions of the present study was; what constitutes effective tutoring behaviours that have desirable effects on students' achievement of cognitive, affective and social objectives?

There were nine tutoring behaviour variables included in the analysis. The pattern of interrelation among the variableswas examined. The result indicated that the interrelationships among the variables were relatively high and positive, and when principal component analysis was performed it yielded a neat single factor. Their correlations with student learning outcomes, especially with student satisfaction, were positive and significant,and the directions of relationships were in general easily interpreted. The tutoring behaviour variables were significantly and negatively related to examination scores, but this was partly due to the coding scheme procedure. The finding should be interpreted this way: if a tutor demonstrated tutoring behaviours that were not directly related to academic less often, and at the same time improved the quality of tutoring behaviours that were directly related to academic matters, the greater the chance s/he would facilitate students to gain higher examination scores.

Although it might be too early to conclude, the elements constituted effective tutoring behaviours had to some extent been identified by the present study. However, the conclusion should not be interpreted that the study had arrived at the point where we knew exactly what madea tutor effective. Moreover, as we all learn that correlation does not

infer causation, thus, further research is of course necessary to undertake to generate clearer picture about what teaching behaviours are responsible for the improved achievements.

6.7 Various problems encountered by students would deter them from achieving maximum learning. It would help to know to what extent each of the problems was the related cause of a lesser degree of student achievement. Out of 12 problems listed on the questionnaire, there were nine of them significantly correlated with the criterion variables. This was also to say, there were nine difficulties, and only if students were assisted to cope with them would they become successful learners in UT. Some of the problems could be related to lack of confidence; feeling isolated, too old, not confidence of learning ability, and educational background was below standard. Others might be related to study environment; too busy, lack of encouragement by spouse or employers, be far a part from tutor and tutorial center, difficult to joint study group and get clear picture about UT/Regional Center. Some other problems might be related to delay or absence of academic feedback, and financial difficulties. The findings seemed to suggest that UT/Regional Center should include in its planning, systematic ways and efforts to assist students to cope with the problems.

Having discussed briefly the findings of correlational study, several key elements to improve tutorial programmes and approaches could be raised. At least three of important elements had been identified by the present study:

1. Some tutoring behaviours that had indicated a general picture of what constituted effective tutoring;

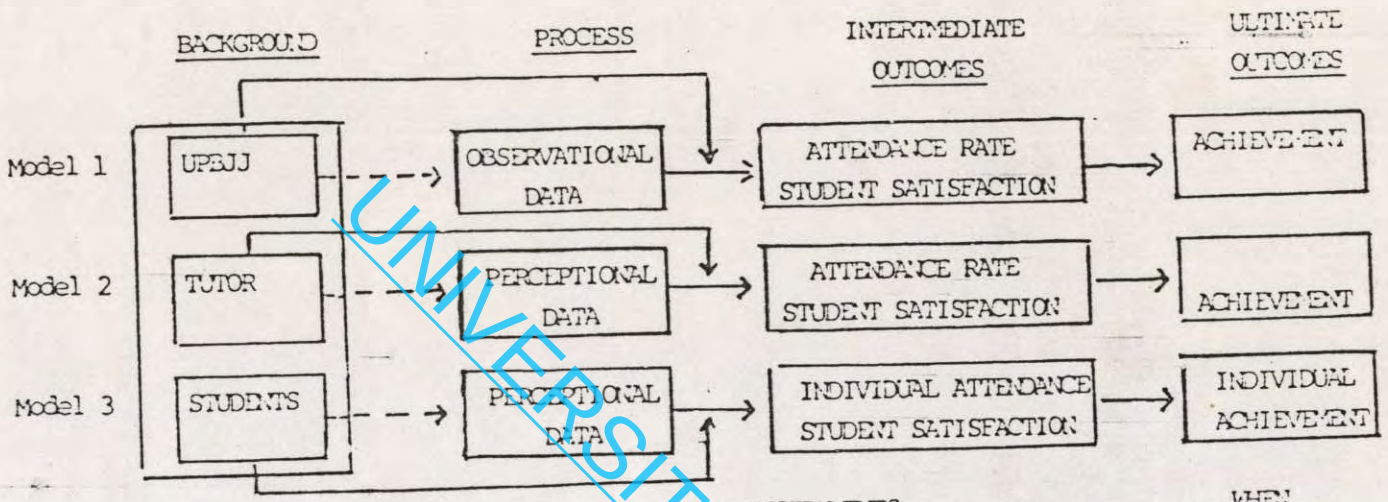
2. Some student's difficulties be they related to motivational, environmental, or personal that had to be eliminated or minimized in order not to deter students from participating and learning in UT; and
3. Evidence that be well prepared by reading modules thoroughly before attending tutorial session was important to maximize learning outcomes.

Therefore, if we want to discuss about what would be the model or models of effective tutorial system, the three pivotal elements discussed above should be taken into consideration.

Further findings that will be useful in generating and formulating possible model(s) of tutorial systems will be discussed in another report, Volume III in which correlational findings regarding the regional centers, tutors, classroom observations and students will be presented. Contextual or compositional analysis will be performed, and hence, makes possible to examine interrelated effects of student, regional center, tutor and classromm observation on student learning outcomes.

APPENDIX 1 : LIST OF FIGURE AND TABLES

FIGURE 1 MODEL OF THE STUDY



VARIABLES
1. Achievement
2. Student Satisfaction
3. Attendace Rate
4. Observational Data
5. UPBJJ Background
6. Tutor's Background and Perception
7. Students' Background Perception

SOURCES
1. Class Average
2. Sampled Students
3. Class Average
4. Tutor (s) Behaviors
5. Heads + UPBJJ, Staffs
6. All Mathematics and English tutors
7. Sampled Students

INSTRUMENTS
1. Semester Exam
2. Rating Scale (M2)
3. Attendance List
4. Observations Formats (OBS-KLS)
5. UPBJJ Questionnaire (U1&U2)
6. Tutor Questionnaire (T1)
7. Student Questionnaire (M1)

WHEN
1. End of each semester
2. End of third Tutorial
3. Every Tutoring Event
4. Second and third tutorials
5. First visit of Third semester
6. End of third tutorial
7. End of third tutorial

TABLE 1: SAMPLE

	Regional Centres	Population (N)	Sample (n)	Percentage (%)
A.	Large			
	Padang	872	90	10.32
	Bandung	1832	200	10.92
	Yogyakarta	1617	160	9.90
	Surabaya	2080	210	10.10
B.	Medium			
	Bandar Lampung	593	60	10.12
	Denpasar	574	60	10.45
	Ujung Pandang	466	50	10.73
	Manado	409	50	12.23
C.	Small			
	Pekanbaru	366	50	13.66
	Pontianak	255	40	15.69
	Samarinda	300	40	13.33
	Ambon	209	35	16.75
	Total	9579	1045	10.91

TABLE 2: LIST OF REDUCED VARIABLES

A. Student Background

V4	Age	V9	Employed
V5	Sex	V14	Total Work Experience
V6	Marital Status	V15	Income/Salary

B. Academic Background

V20 Higher education attended except UT

V24 Read articles/journal/books/relevant to the study being pursued

V25 Followed a course relevant to the study being pursued

C. Ease Access

V16 Distance from home to the tutorial center

V17 Time spent to get to the tutorial center from home

D. Preparation

V65 Read the modules before attending tutorial

E. Motivation to Attend Tutorial

V29 Wishing to get a description about UT and the Regional Unit

V30 Getting to know each other

V31 Asking about difficulties relevant to the study

V32 Increasing the motivation to learn

V33 Wishing to know how to study individually

V34 Killing time

V35 Tutorial Meeting is compulsory

V36 Enriching knowledge

F. Tutoring Behavior

V52 Discussing the outline of the module

V53 Identifying the important items

V54 Resuming materials in the modules

V55 Discussing effective methods of studying individually

V56 Questioning and answering intensively

V57 Discussing administratur matters
V58 Discussing errors in the modules
V60 Motivating students in their study
V61 Discussing test items

G. Student Difficulties

V130 Feeling isolated
V131 Feeling difficult to study individually
V132 Living far away from the tutor's residence
V133 Inadequate knowledge concerning UT
V134 Feeeling too old
V135 Difficulties in getting information about student academic progress
V136 Difficulties in participating in study group
V137 Financial problems
V138 Educational background is below standard
V139 Problems due to employment related matters
V140 Difficulties in communicating with Regional Centre
V141 Family related problems

H. Motivation to enter UT

V146 Developing one's career
V147 Having no opportunity to continue to higher education before hand
V148 Not accepted in other universities/institutes
V149 Activating one's mind
V150 To be able to get a better job
V151 Wishing to deepen one's study on a certain subject
V152 In order to be promoted
V153 In order to get friends
V154 Killing the time while waiting to enter other universities/institutes

TABLE 3: INTERCORRELATION MATRIX AMONG STUDENT CHARACTERISTICS, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V04	V05	V06	V09	V14	V15	V03	V02	PUAS1	M2PUAS	NILAIPAR	ACH
V04	MIAGE	1											
V05	M1SEX	-0,302	1										
V06	M1MAR	0,733	-0,234	1									
V09	M1JOB	0,575	-0,364	0,434	1								
V14	M1EXP	0,837	-0,364	0,624	0,770	1							
V15	M1INCOME	0,674	-0,371	0,564	0,741	0,808	1						
V03	M1SUBJ	-0,238	0,022	-0,197	-0,151	-0,161	-0,133	1					
V02	M1UPBJJ	-0,018	0,170	-0,080	-0,042	-0,004	-0,161	0,087	1				
	PUAS1	0,056	-0,003	0,009	0,208	0,048	0,030	0,087	0,130	1			
	M2PUAS	0,077	-0,004	0,008	0,000	0,059	-0,053	0,043	0,089	0,257	1		
	NILAIPAR	-0,052	0,075	-0,085	-0,051	-0,019	-0,111	0,138	0,315	0,204	0,035	1	
	ACH	-0,000	0,053	0,004	-0,032	-0,010	0,048	0,364	0,060	0,077	-0,052	0,139	1

Note : r=0,08 p=0,05
r=0,13 p=0,01

TABLE 4: INTERCORRELATION MATRIX AMONG STUDENT ACADEMIC BACKGROUNDS, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V20	V24	V25	V16	V17	V65	V03	V02	PUAS1	M2PUAS	NILAIPAR	ACH
V20	M1SCHO	1											
V24	M1READ	0,115	1										
V25	M1COURS	0,070	0,179	1									
V16	M1DIST	-0,069	-0,005	0,055	1								
V17	M1TIME	-0,120	-0,044	0,003	0,581	1							
V65	M1BEL	0,090	0,115	0,077	-0,002	0,002	1						
V03	M1SUBJ	-0,106	-0,071	-0,102	0,091	0,157	-0,005	1					
V02	M1UPBJJ	0,090	-0,018	0,017	0,054	0,078	0,086	0,087	1				
	PUAS1	0,082	0,094	0,038	0,037	0,104	0,218	0,087	0,130	1			
	M2PUAS	-0,051	0,017	-0,004	0,057	0,065	0,090	0,043	0,089	0,257	1		
	NILAIPAR	-0,072	0,053	0,072	0,114	0,112	0,165	0,138	0,315	0,204	0,035	1	
	ACH	0,112	0,025	0,055	0,044	0,025	0,123	0,364	0,060	0,077	-0,052	0,139	1

Note : r=0,08 p=0,05
r=0,11 p=0,01

TABLE 5: INTERCORRELATION MATRIX AMONG MOTIVATION TO ATTEND TUTORIAL, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V29	V30	V31	V32	V33	V34	V35	V36	V03	V02	PUAS1	M2PUAS	NILAIPAR	ACH
V29	M1DIR	1													
V30	M1KNOW	0,417	1												
V31	M1DIF1	-0,005	0,226	1											
V32	M1SOUL	0,226	0,299	0,388	1										
V33	M1SELFED	0,510	0,334	0,170	0,356	1									
V34	M1LATIME	-0,258	-0,230	0,084	-0,092	-0,282	1								
V35	M1DUTY	0,207	0,114	0,055	0,142	0,197	-0,207	1							
V36	M1RICH	0,087	0,203	0,334	0,335	0,210	-0,036	0,190	1						
V03	M1SUBJ	0,071	-0,010	0,038	0,044	0,002	-0,123	-0,045	-0,033	1					
V02	M1UPBJJ	0,106	0,105	-0,005	0,124	0,033	-0,072	0,011	-0,006	0,087	1				
	PUAS1	0,013	0,065	0,115	0,216	0,111	-0,113	0,056	0,065	0,087	0,130	1			
	M2PUAS	0,014	0,062	0,029	0,043	0,048	0,004	0,022	0,071	0,043	0,089	0,257	1		
	NILAIPAR	0,061	0,098	0,059	0,115	0,055	-0,056	0,023	0,157	0,138	0,315	0,204	-0,052	1	
	ACH	-0,104	-0,043	0,043	-0,016	-0,159	0,047	-0,161	0,000	0,364	0,060	0,077	-0,052	0,139	1

Note : r=0,08 p=0,05
r=0,12 p=0,01

TABLE 6: INTERCORRELATION MATRIX AMONG TUTORING BEHAVIOUR, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V52	V53	V54	V55	V56	V57	V58	V60	V61	V03	V02	PUAS1	M2PUAS	NILAIPAR	ACH
V52	M1MOD	1														
V53	M1IDEN	0,312	1													
V54	M1RESUME	0,274	0,367	1												
V55	M1LEF	0,298	0,377	0,373	1											
V56	M1QAIN	0,099	0,198	0,201	0,277	1										
V57	M1ADM	0,101	0,303	0,276	0,371	0,144	1									
V58	M1MIST	0,196	0,273	0,246	0,293	0,311	0,280	1								
V60	M1MOST	0,284	0,359	0,293	0,442	0,279	0,286	0,351	1							
V61	M1TEST	0,158	0,443	0,260	0,350	0,218	0,364	0,303	0,293	1						
V03	M1SUBJ	-0,074	-0,038	-0,053	-0,016	-0,085	0,033	0,273	-0,103	-0,042	1					
V02	M1UPBJJ	0,001	-0,022	0,015	-0,074	-0,025	-0,184	0,038	-0,061	-0,069	0,087	1				
	PUAS1	0,196	0,070	0,192	0,078	0,311	-0,076	0,096	0,139	0,109	0,087	0,130	1			
	M2PUAS	0,116	0,093	0,133	0,189	0,199	0,076	0,126	0,092	0,229	0,043	0,089	0,257	1		
	NILAIPAR	0,109	-0,014	0,069	0,073	0,022	-0,109	0,035	-0,014	-0,035	0,138	0,315	0,204	0,035	1	
	ACH	-0,116	-0,144	-0,070	-0,176	-0,073	-0,188	0,015	-0,167	-0,118	0,364	0,060	0,077	-0,052	0,139	1

Note : r=0,08 p=0,05
r=0,12 p=0,01

TABLE 7: INTERCORRELATION MATRIX AMONG STUDENT DIFFICULTIES, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V130	V131	V132	V133	V134	V135	V136	V137	V138	V139	V140	V141	V003	V002	PUASI	M2PUAS	NILAIPAR	ACH
V130	M1REM	1																	
V131	M1DIFSED	0,177	1																
V132	M1DISTH	0,300	0,123	1															
V133	M1EXUT	0,148	0,233	0,196	1														
V134	M1OLD	0,021	-0,048	-0,028	0,006	1													
V135	M1DIPROG	0,232	0,345	0,119	0,285	0,118	1												
V136	M1DIACT	0,194	0,063	0,156	0,048	0,035	0,275	1											
V137	M1DIMON	0,243	0,167	0,157	0,050	0,070	0,205	0,145	1										
V138	M1BACK	0,147	0,230	0,104	0,085	0,167	0,257	0,153	0,220	1									
V139	M1DLJOB	0,062	0,023	0,006	-0,105	0,198	0,059	0,123	0,063	0,198	1								
V140	M1DICOM	0,204	0,081	0,235	0,219	0,018	0,133	0,135	0,131	0,140	0,167	1							
V141	M1DIFAM	0,076	0,059	-0,049	0,040	0,145	0,056	0,001	0,201	0,072	0,296	0,12	1						
V003	M1SUBJ	-0,040	-0,114	-0,052	-0,138	0,036	0,008	0,026	-0,048	0,065	0,113	-0,075	0,072	1					
V002	M1UPBJJ	0,170	-0,037	0,020	-0,043	-0,003	0,023	-0,063	-0,095	0,012	0,055	-0,002	-0,002	0,087	1				
	PUAS1	0,105	0,115	0,132	0,206	0,108	0,146	0,143	0,056	0,086	0,054	0,065	-0,009	0,087	0,320	1			
	M2PUAS	0,129	0,056	0,006	0,111	0,001	0,123	0,061	0,015	0,061	0,036	0,081	-0,062	0,043	0,089	0,257	1		
	NILAIPAR	-0,041	-0,015	-0,019	-0,041	-0,062	-0,050	0,004	-0,019	-0,039	0,187	-0,020	0,078	0,138	0,315	0,035	0,204	1	
	ACH	0,038	0,116	0,038	0,045	-0,023	0,021	0,158	0,101	0,131	0,018	0,024	0,033	0,364	0,060	-0,052	0,077	0,140	1

Note : r=0,09 p=0,05
r=0,11 p=0,01

TABLE 8: INTERCORRELATION MATRIX AMONG MOTIVATION TO ENTER UT, GROUP MEMBERSHIP, COURSES, AND STUDENT LEARNING OUTCOMES

		V146	V147	V148	V149	V150	V151	V152	V153	V154	V003	V002	PUAS1	M2PUAS	NILAIPAR	ACH
V146	M1CAR	1														
V147	M1OPP	-0,102	1													
V148	M1NAC2	0,075	0,215	1												
V149	M1ACTIV	0,237	-0,016	-0,029	1											
V150	M1OFF	-0,099	0,133	0,184	0,000	1										
V151	M1STU	0,289	-0,056	-0,023	0,313	-0,094	1									
V152	M1LEV	-0,186	0,238	0,050	0,004	0,419	-0,067	1								
V153	M1FRIE	-0,034	0,026	0,154	-0,087	0,088	-0,103	0,195	1							
V154	M1FILOTI	0,101	-0,002	0,380	0,000	0,163	-0,018	0,135	0,299	1						
V003	M1SUBJ	-0,014	0,048	-0,066	0,062	-0,076	-0,003	0,061	0,033	-0,068	1					
V002	M1UPBJJ	0,013	0,029	-0,059	0,075	-0,122	0,073	-0,069	0,041	-0,079	0,086	1				
	PUAS1	0,086	0,036	-0,003	0,133	-0,023	0,090	0,042	-0,013	-0,014	0,087	0,130	1			
	M2PUAS	-0,017	-0,028	-0,046	0,070	-0,008	0,060	0,089	-0,169	-0,038	0,043	0,089	0,257	1		
	NILAIPAR	-0,038	0,005	-0,026	0,005	-0,026	0,042	-0,137	-0,013	-0,079	0,138	0,315	0,204	0,035	1	
	ACH	0,068	0,024	0,145	0,075	-0,019	0,027	0,054	0,115	0,063	0,364	0,060	0,077	-0,052	0,140	1

Note : r=0,09 p=0,05
r=0,12 p=0,01

TABLE 14: LIST OF USED VARIABLES IN REGRESSION

		FACTORS LOADING	
		English	Mathematics
A.	Student Characteristics		
	V4	.89110	.87833
	V5	-	-
	V6	.80331	.70287
	V9	.79456	.85638
	V14	.94328	.95548
	V15	.88820	.85894
B.	Academic Backgrounds		
	V20	.56941	-
	V24	.70668	.75542
	V25	.68442	.75542
C.	Ease Access		
	V16	.87000	.91845
	V17	.87000	.91845
D.	Preparation		
	V65	*	*
E.	Motivation to Attend Tutorial		
	V29	.52711	.77112
	V30	.65637	.69360
	V31	.56172	-
	V32	.71102	.60823
	V33	.70665	.75264
	V34	-	-
	V35	-	.43095
	V36	.54162	.53973
F.	Tutoring Behavior		
	V52	.47223	.48733
	V53	.63508	.76815
	V54	.52446	.67342
	V55	.74756	.69446
	V56	.53136	.43596
	V57	.52701	.59167
	V58	.67208	.59620
	V60	.70357	.65050
	V61	.59326	.70767

		FACTORS LOADING	
		English	Mathematics
G.	Student Difficulties		
	V130	.57811	.62384
	V131	.57181	.53147
	V132	.50827	.50961
	V133	-	.53314
	V134	-	-
	V135	.54977	.69434
	V136	.49250	.45498
	V137	.55653	.42903
	V138	.51501	.52578
	V139	-	-
	V140	.51200	.41662
	V141	-	-
H.	Motivation to Become UT Student		
	V146	-	.51158
	V147	.57101	-
	V148	.55251	.65081
	V149	-	.39431
	V150	.72777	-
	V151	-	-
	V152	.71341	-
	V153	.46825	.60926
	V154	-	.73446

TABLE 15a SUMMARY OF REGRESSION ANALYSIS RESULTS FOR ENGLISH CLASSES

Variables in Regression: Predictors	Criterion	R^2	Increment	F
1. Student characteristics	PUAS1	.00	.00	ns
2. Academic backgrounds & (1)		.03	.03	6.28 1)
3. Student difficulties & (1+2)		.06	.03	7.30 1)
1. Student characteristics	PUAS2	.02	.02	4.57 2)
2. Academic backgrounds & (1)		.02	.00	ns
1. Student characteristics	NIPAR	.00	.00	1.40 ns
2. Academic backgrounds & (1)		.01	.01	1.07 ns
3. Regional Centres & (1+2)		.11	.10	23.73 1)
4. Motivation of attending tutorial & (1+2+3)		.14	.03	8.93 1)
5. Reading modul before tutorial & (1+2+3)		.17	.03	6.25 1)
1. Student characteristics	ACHIEV	.01	.01	2.42 ns
2. Academic backgrounds & (1)		.02	.01	3.26 ns
3. Student difficulties & (1+2)		.05	.03	5.48 2)

1) $p = < 0.1$

2) $p = < 0.5$

ns = not significant

TABLE 15b SUMMARY OF REGRESSION ANALYSIS RESULTS FOR MATHEMATICS CLASSES

Variables in Regression: Predictors	Criterion	R^2	Increment	F
1. Student characteristics	PUAS1	.00	.00	.10 ns
2. Academic backgrounds & (1)		.00	.00	.37 ns
1. Student characteristics	PUAS2	.00	.00	.16 ns
2. Academic backgrounds & (2)		.00	.00	.00 ns
3. Tutoring behaviours & (1+2)		.07	.07	13.21 1)
4. Motive of attending tutorial & (1+2+3)		.10	.03	5.98 1)
1. Student characteristics	NIPAR	.00	.00	.66 ns
2. Academic backgrounds & (1)		.01	.01	1.08 ns
3. Regional Centres & (1+2)		.12	.11	19.26 1)
1. Student characteristics	ACHIEV	.00	.00	1.32 ns
2. Academic backgrounds & (1)		.00	.00	.00 ns
3. Student difficulties & (1+2)		.06	.06	9.60 1)
4. Tutoring behaviours & (1+2+3)		.15	.09	15.46 1)

1) p = < 0.1

2) p = < 0.5

ns = not significant

TABLE 16 : RESULTS OF CLASSROOM OBSERVATIONS

	English classes			Mathematics classes		
	X	SD	SK	X	SD	SK
1. Tutor Behaviour						
Tutor Ask	10.69	8.01	0.442	8.05	6.45	0.306
Tutor Explain	22.77	1.88	-2.29	22.29	5.78	-2.77
Tutor Assign	5.88	6.06	1.17	2.10	2.64	1.65
Other	2.62	3.48	1.61	1.7	2.24	1.28
2. Teaching Aids						
Black board	16.73	6.70	-0.98	19.76	5.05	-1.53
Pictures/Model	-	-	-	0.95	3.03	3.03
3. Objectives						
Content Related	22.96	1.37	-1.51	21.67	2.90	-2.00
Content nonrelated	2.19	2.30	1.18	2.19	3.31	1.55
Correcting Errors	1.58	2.55	2.21	1.33	1.35	0.79
4. Climate						
Enthusiastic	20.96	6.13	-2.52	19.33	5.08	-0.73
Dull/Boring	2.35	5.53	3.21	4.62	5.65	0.81
5. Context						
Small Group	3.92	8.39	1.96	3.91	8.02	1.93
Large Group	18.73	9.43	-1.58	19.48	8.76	-1.82
6. Climate class						
Good	12.19	8.10	-0.17	13.47	7.81	-0.04
Medium	6.73	7.29	0.65	6.10	6.11	0.39
Bad	0.65	1.85	3.25	0.86	1.77	2.64

	English classes			Mathematics classes		
	X	SD	SK	X	SD	SK
7. Verbal Interaction						
a. Content Related						
- Student Comment	20.11	17.54	0.96	12,81	13.06	1,51
- Student Ask	10.35	14.33	2.61	12.71	9.50	0.93
b. Noncontent Related						
- Student Comment	1.58	4.39	4.35	0.91	1.79	1.90
- Student Ask	0.48	1.37	2.93	0.46	1.10	3.20

APPENDIX 2 : CODING SCHEME FOR INSTRUMEN M_1

CODING SCHEME FOR INSTRUMENT M1

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
1.	M1NIM	2	The Student's Index Number			1-10
2.	M1UPBJJ	3	The Regional Unit			11-13
3.	M1SUBJ	4	Department	1 = Economy 2 = Statistics		14
4.	M1AGE	5	Age		00-99	16-17
5.	M1SEX	6	Sex	1 = Male 2 = Female		18
6.	M1MAR	7	Marital status	1 = Not married yet 2 = Married 3 = Widow 4 = Widower		19
7.	M1NCHILD	8	Number of children		0-9	20
8.	M1NRESP	9	Number of dependents		0-9	21
9.	M1JOB	10	Employed	1 = No 2 = Yes		22
10.	M1WJOB	11	Employed mainly as	1 = Government employee 2 = Non government employee 3 = Enterpreneur 4 = Others		23
11.	M1SJOB	12	Employment status	1 = Temporary 2 = Permanent		24
12.	M1RAND	13	Occupation	1 = Staff 2 = Assistant administrator 3 = Administrator/expert 4 = Others		25
13.	M1PROF	14	Profession/activity			26-27
14.	M1EXP	15	Total work experience		00-99	28-29

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
15.	M1INCOME	16	Income/salary			30-36
16.	M1DIST	17	The Distance from home to the tutorial center		000-999	37-39
17.	M1TIME	18	The time spent to get to the tutorial center from home		00-99	40-41
18.	M1SERTI	19	High school certificate	1 = Senior high school 2 = Economic high school 3 = Technical high school 4 = Home economic high school 5 = Teacher high school 6 = High school for teachers in religion (Moslem)		42
19.	M1 YEAR	20	Year of graduation		00-99	43-44
20.	M1SCHO	21	Higher education attended except UT	1 = No 2 = Yes		45
21.	M1DEPT	22	Chosen department			46-47
22.	M1SLEV	23	Level at present	1 = Level 1 2 = Level 2 3 = Level 3 4 = BA graduate 5 = Level 4 6 = Level 5 7 = Graduate (higher education)		48

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
23.	M1SHER	24	The highest level certificate	1 = Senior high school 2 = Diploma 1 3 = Diploma 2 4 = Diploma 3 5 = BA 6 = Teacher's certificate 7 = Higher education certificate 8 = Others		49
24.	M1READ	25	Do you read articles/journals/books relevant to the study being persued	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		50
25.	M1COURS	26	Have you ever followed a course relevant to the study being persued	1 = No 2 = Yes		51
26.	M1JOINT1	27.1	Have you attended Tutorial I semester III	1 = No 2 = Yes		52
27.	M1JOINT2	27.2	Have you attended Tutorial II semester III	1 = No 2 = Yes		53
28.	M1JOINT3	27.3	Have you attended Tutorial III semester III	1 = No 2 = Yes		54
29.	M1DIR	28.1	Reason in attending the tutorial: Wishing to get a description about UT and the Regional Unit	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		55

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
30.	MIKNOW	28.2	The students should know each other	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		56
31.	MIDIF	28.3	Asking about the difficulties relevant to the study	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		57
32.	MISOL	28.4	Increasing the motivation in learning	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		58
33.	MISELFED	28.5	Wishing to know how to study individually	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		59
34.	MIIATIME	28.6	Killing time	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		60

NO.	VAR IABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
35.	M1DUTY	28.7	The tutorial Meeting is compulsory	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		61
36.	M1RICH	28.8	Enriching knowledge	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		62
37.	M1COMT	28.9	Building up a communication with the tutor	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		63
38.	M1SOLVER	28.10	Solving the difficulties found in the module	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		64
39.	M1WAY	28.11	Wishing to know how to give tutorials	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		65
			Reasons not to attend tutorial meetings:			
40.	M1NOTIME	29.1	No time	1 = No 2 = Yes		66

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
41.	M1NODIF	29.2	No difficulties in that particular subject	1 = No 2 = Yes		67
42.	M1FAR	29.3	The tutorial center is far away	1 = No 2 = Yes		68
43.	M1NOCED	29:4	Ignorant of the schedule	1 = No 2 = Yes		69
44.	M1MUSNO	29.5	The tutorial meeting is not compulsory	1 = No 2 = Yes		70
45.	M1NAT	29.6	Due to the weather	1 = No 2 = Yes		71
46.	M1SICK	29.7	Due to health	1 = No 2 = Yes		72
47.	M1FAM	29.8	Due to family problems	1 = No 2 = Yes		73
48.	M1MONEY	29.9	Due to financial problems	1 = No 2 = Yes		74
49.	M1TMUSIM	29.10	The tutorial meeting is not interesting	1 = No 2 = Yes		75
50.	M1NOFIT	29.11	The tutorial schedule does not suit the students	1 = No 2 = Yes		76
51.	M1OTH29	29.12	Others	1 = No 2 = Yes		77
			The tutor's activities during the meeting:			

NO.	VAR IABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
52.	M1NDD	30.1	Discussing the outline of the module	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		78
53.	M1IDEN	30.2	Identifying the important items	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		79
54.	M1RESUME	30.3	Making a resume of the material in the module	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		80
55.	M1LEF	30.4	Discussing the effective method of studying individually	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		81
56.	M1QAIN	30.5	Questioning and answering intensively	1 = Never 2 = Very Seldom 3 = Seldom 4 = Often 5 = Very often		82

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
57.	MIADM	30.6	Discussing academic matters with the students	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		83
58.	MIMIST	30.7	Discusing the mistakes in the modules	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		84
59.	MIEXPAG	30.8	Discussing the material in the module page by page	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		85
60.	MIMOST	30.9	Motivating the students in their study	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		86
61.	MITEST	30.10	Discussing the test items	1 = Never 2 = Very seldom 3 = Seldom 4 = Often 5 = Very often		87

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE VALUE	COLOM
[illegible]	MIINTI	31	Making an abstract of the tutor's explanation	1 = Not able to 2 = A small part is able to 3 = A part is able to 4 = A large part is able to 5 = On the whole is able to	88
[illegible]	MITSERV	32	The presentation of material by the tutor	1 = Very uninteresting 2 = Uninteresting 3 = Interesting 4 = Very interesting	89
64.	MIMAN	33	The conducting of tutorial meetings to increase the students' skills and knowledge is advantageous	1 = Not advantageous at all 2 = Not so advantageous 3 = Advantageous 4 = Very advantageous	90
65.	MIBEL	34	Studying the module first before	1 = Not at all 2 = Yes, a small part 3 = Yes, a part 4 = Yes, a great part 5 = Yes, entirely	91
			The constraints that result in the student's unability to study the module before the tutorial:		
66.	MINDIST	35.1	No time to study	1 = Yes 2 = No	92
67.	MINDSED	35.2	Unable to study individually	1 = Yes 2 = No	93
68.	MINAC	35.3	The modules are not available yet	1 = Yes 2 = No	94
69.	MISHY	35.4	Not motivated to study as there is a lot of material	1 = Yes 2 = No	95

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
[illegible]	[illegible]	35.5	Due to family problems	1 = Yes 2 = No		96
[illegible]	[illegible]	35.6	Due to health	1 = Yes 2 = No		97
[illegible]	[illegible]	35.7	Due to problems at work	1 = Yes 2 = No		98
[illegible]	[illegible]	35.8	The module is too difficult	1 = Yes 2 = No		99
			The most convenient time to attend the tutorial meeting in semester III (in minutes):			
[illegible]	M1JOIN1	36.1	Tutorial I		000-999	100-102
	M1JOIN2	36.2	Tutorial II		000-999	103-105
	M1JOIN3	36.3	Tutorial III		000-999	106-108
			The aids used during the tutorial:			
77.	M1BOARD	37.1	Blackboard	1 = No 2 = Yes		109
78.	M1OHP	37.2	Overhead projector	1 = No 2 = Yes		110
[illegible]	M1SLID	37.3	Slide projector	1 = No 2 = Yes		111
80.	M1VTR	37.4	Video tape recorder	1 = No 2 = Yes		112
81.	M1TR	37.5	Tape recorder	1 = No 2 = Yes		113
82.	M1PIC	37.6	Illustration/models	1 = No 2 = Yes		114
83.	M1JOTEX	38	Attending the extra tutorial meetings	1 = No 2 = Yes		115

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
...	MIORG	39	Managing the extra tutorial meetings	1 = Students 2 = Individual 3 = Institute/department		116
			Factors that motivate students to attend the extra tutorial meetings:			
..).	MIKUPU	40.1	The service provided by the Regional is not sufficient	1 = Yes 2 = No		117
..).	MIMEDIF	40.2	The material is too difficult	1 = Yes 2 = No		118
..).	MIWKTI	40.3	The time scheduled by the Regional Unit is limited	1 = Yes 2 = No		119
..).	MINUP	40.4	Not attending the tutorial meeting at the Regional Unit	1 = Yes 2 = No		120
..).	MIKOM	40.5	Wanting to compare the tutorial held by the Regional Unit with the extra tutorial meeting	1 = Yes 2 = No		121
90.	MIFAST	40.6	Wishing to master the content of the module as soon as possible	1 = No 2 = Yes		122
91.	MIOTHO	40.7	Others	1 = Yes 2 = No		123
			The tutors at the extra tutorial meeting:			
92.	MI WRIT	41.1	The module writer	1 = Yes 2 = No		124
93.	MIAUP	41.2	A tutor of the Regional Unit	1 = Yes 2 = No		125
94.	MILUS	41.3	A lecturer who is not a tutor of UT	1 = Yes 2 = No		126

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
[illegible]	M1KAR	41.4	An employee	1 = Yes 2 = No		127
[illegible]	M1MHS	41.5	A student of UT	1 = Yes 2 = No		128
[illegible]	M1MANUT	41.6	A student not of UT	1 = Yes 2 = No		129
[illegible]	M1OTH41	41.7	Others	1 = Yes 2 = No		130
[illegible]	M1QUTEX	42	The frequency of attendance in the extra tutorial semester III		00-99	131-132
[illegible]	M1AVETIM	43	Attending the extra tutorial meeting every time on the average (in hours)			133
[illegible]	M1PAY	44	The monthly pay for the extra meeting per month			134-139
[illegible]	M1GSTUD	45	Becoming a member of a study group	1 = No 2 = Yes		140
			Those conducting the study group:			
[illegible]	M1KSTUD	46.1	Students	1 = No 2 = Yes		141
[illegible]	M1KUP	46.2	The Regional Unit	1 = No 2 = Yes		142
[illegible]	M1KTUT	46.3	Tutor (s)	1 = No 2 = Yes		143
[illegible]	M1JGMEM	47	The number of student in the study study group		00-99	144-145
			Activities performed in the study group:			
[illegible]	M1PERA	48.1	Exchanging information	1 = No 2 = Yes		146

NO.	VAR LABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
116.	M1GTEST	48.2	Doing the unit test/exercises	1 = No 2 = Yes		147
117.	M1DIS	48.3	Discussing the content of the module	1 = No 2 = Yes		148
118.	M1OTH48	48.4	Other activities	1 = No 2 = Yes		149
111.	M1NGJOIN	49	The frequency of attendance in the study group in semester III		00-99	150-151
112.	M1GAVTI	50	The average time spent for each activity in the study group		0-9	152
			The resource person in the study group:			
113.	M1GMEN	51.1	The member of the study group	1 = No 2 = Yes		153
114.	M1GNANUT	51.2	Students of non UT	1 = No 2 = Yes		154
115.	M1GDOS	51.3	Lecturers of government institutes/ universities/non government ones	1 = No 2 = Yes		155
116.	M1GTUP	51.4	Tutors of the Regional Unit	1 = No 2 = Yes		156
117.	M1OTH51	51.5	Others	1 = No 2 = Yes		157
			Reasons for not becoming members of a study group:			
118.	M1GNUTI	52.1	No time	1 = No 2 = Yes		158
119.	M1GDIS	52.2	The distance of the study group center is far from home	1 = No 2 = Yes		159

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
[illegible]	[illegible]	52.3	Has attended the tutorial at the Regional Unit	1 = No 2 = Yes		160
[illegible]	[illegible]	52.4	Has attended the extra tutorial	1 = No 2 = Yes		161
[illegible]	[illegible]	52.5	Preferring to study individually	1 = No 2 = Yes		162
[illegible]	[illegible]	52.6	No guidance from the Regional Unit	1 = No 2 = Yes		163
[illegible]	[illegible]	52.7	Other reasons	1 = No 2 = Yes		164
125.	M1HELP	53	Taking advantage of the assisstance offered by the tutor outside the tutorial hour Activities done outside the tutorial meeting:	1 = Not offered 2 = Not make use of it 3 = Make use of it		165
126.	M1TELP	54.1	Giving the tutor a call	1 = Never 2 = Yes		166
127.	M1LET	54.2	Sending a letter to the tutor	1 = Never 2 = Yes		167
128.	M1COME	54.3	Coming to see the tutor	1 = Never 2 = Yes		168
129.	M1REACT	55	If you have, how does the tutor respond	1 = Not giving any response at all 2 = Giving a response after a long time 3 = Giving a response after quite a while 4 = Giving a response quickly 5 = Giving a response immediately		169
130.	M1RSM	56.1	Feeling isolated	1 = Always 2 = Sometimes 3 = Never		170

	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
	[illegible]	56.2	Feeling difficult to study individually	1 = Always 2 = Sometimes 3 = Never		171
	[illegible]	56.3	Living far away from the tutor's residence	1 = Always 2 = Sometimes 3 = Never		172
	[illegible]	56.4	Lacking knowledge concerning UT	1 = Always 2 = Sometimes 3 = Never		173
	[illegible]	56.5	Feeling too old	1 = Always 2 = Sometimes 3 = Never		174
	[illegible]	56.6	Finding difficulties in visualizing some improvement in his/her study	1 = Always 2 = Sometimes 3 = Never		175
	[illegible]	56.7	Finding difficulties in participating in the activities of the study group	1 = Always 2 = Sometimes 3 = Never		176
	[illegible]	56.8	Problems in financial matters	1 = Always 2 = Sometimes 3 = Never		177
	[illegible]	56.9	The educational background is below standard	1 = Always 2 = Sometimes 3 = Never		178
	[illegible]	56.10	Constraints due to factors in the main employment	1 = Always 2 = Sometimes 3 = Never		179

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE VALUE	COLOM
1..	[illegible]	56.11	Difficult to communicate with the Regional Unit	1 = Always 2 = Sometimes 3 = Never	180
1..	[illegible]	56.12	Problems in the family	1 = Always 2 = Sometimes 3 = Never	181
1..	[illegible]	56.13	Other problems	1 = Always 2 = Sometimes 3 = Never	182
			The tutors attended in semester III:		
1.4.	MTSEXT1	57.1	Tutorial I	1 = Male tutor 2 = Female tutor 3 = A team of male tutors 4 = A team of male and female tutors 5 = A team of female tutors	183
1..	MTSEXT2	57.2	Tutorial II	1 = Male tutor 2 = Female tutor 3 = A team of male tutors 4 = A team of male and female tutors 5 = A team of female tutors	184
1.5.	MTSEXT3	.3	Tutorial III	1 = Male tutor 2 = Female tutor 3 = A team of male tutors 4 = A team of male and female tutors 5 = A team of female tutors	185
			Motivation factors contributing to become a student of UT:		

NO.	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
[illegible]	[illegible]CAR	58.1	Developing one's career	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		186
[illegible]	[illegible]OAP	58 2	Not having an opportunity to continue studying before hand	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		187
[illegible]	[illegible]NAC	58.3	Not accepted in other universities/institutes	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		188
[illegible]	[illegible]TIVATE	58.4	Activating one's mind	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		189
[illegible]	[illegible]OF	58.5	To be able to get a better job	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		190

	VARIABLE	NO ITEM	DESCRIPTION	CODE	VALUE	COLOM
	[illegible]	58.6	Wishing to deepen one's study on a certain subject	1 = Strongly disagree 2 = Disagree 3 = No comment 4 = Agree 5 = Strongly agree		191
	[illegible]	58.7	In order to be promoted	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		192
	[illegible]	58.8	In order to get friends	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagre 5 = Strongly disagree		193
	[illegible]	58.9	Killing the time while waiting to enter other universities/institutes	1 = Strongly agree 2 = Agree 3 = No comment 4 = Disagree 5 = Strongly disagree		194
	[illegible]	58.10	Other reasons	1 = Strongly agree 2 = Agree 3 = No comment 4 = Agree 5 = Strongly agree		195
	[illegible]	59	Being a student in one or other universities/insitutes	1 = No 2 = Yes		196

BIBLIOGRAPHY

Amic,D.J., and Walberg, H.J. Introductory multivariate analysis. Berkeley, Calif.: Mc Cutchan Pub. Corp., 1974

Bennet,N. Teaching styles and pupil progress. London : Open Books Pub. Ltd., 1976

Bloom, B.S. Time and Learning. American Psychologist, September, 1974, 29, 682 - 688

Brophy,J.E., and Evertson,C.M. Process - product correlations in the Texas teacher effectiveness study : Final Report.. Research Report No.74 - 4. Austin, Texas : Research and Development Center for Teacher Education ; University of Texas, 1974

Brophy,J.E., and Evertson,C.M. Learning from teaching : A development perspective Boston : Allyn and Bacon, Inc., 1976

Coleman,J.S., Campbell,E.Q., Hobson,C.J., Mc Partland,J., Mood,A.M., Weinfeld,F.D., and York,R.L. Equality of educational opportunity. Washington,D.C. : U.S. Dept of Health, Education, and Welfare, Office of Education, U.S. Govt. Printing Office, 1966

Djalil,A., Zainul,I.A., Kuswaya W., Mahdi,M., and Rosa,T. Research on tutorial systems of Universitas Terbuka. Jakarta: International Development Research Center (IDRC) in Collaboration with Universitas Terbuka (UT), 1986

Dunkin,M.J., and Biddle,B.J. The study of teaching. New York : Holt, Rinehart and Winston, 1974

Gage,N.L. Paradigm for research on teaching. In N.L. Gage (Ed.). Handbook of research on teaching. Chicago : Rand Mc Nally, 1963

Holmberg,B. Recent research into distance education. Hagen : Fern University, 1982

Machfud,S., Mahdi,M., Zainul,I.A., and Rosa Tosaini. Kajian Persepsi terhadap keberadaan Universitas Terbuka. Jakarta : Pusat Penelitian UT, 1987

Mangindaan,C.S., Sembiring.R.K., and Livingstone,I.D. National assessment of the quality of Indonesian education : Survey of achievement in grade 9.
Jakarta : Office of Educational and Cultural Research and Development, Ministry of Education and Culture in Association with The New Zealand Council for Educational Research, 1978

Medley,D. The effectiveness of teacher. In P.L. Peterson and H.J Walberg (Eds). Research on teaching. Berkeley, Calif.: Mc Cutchan Pub.corp., 1979

Moegiadi; Mangindaan,C.S., and Elley,W.B. Evaluation of achievement in the Indonesian education system. In B.H. Coppin and T.N.Postlethwaite (Eds.). Evaluation in education : International Progress : An international review series. Oxford : Pergamon Press,1979

Morsh,J.E., and Wilder,E.W. Indentifying the effective instructor : A review of the qualitative studies, 1900 - 1952. Research Bulletin No.AFPTRC - TR - 54 - 44. Texas : PTRC, 1954

Nie,N.H., Hadlaihull,C., Jenkins,J.G., Steinbrenner,K., and Bent,D.H. Statistical package for the social science, 2 nd edition. New York : Mc Graw - Hill Book Company, 1975

Rencana Pembangunan Lima Tahun Keempat, 1984/85 - 1988/89. Buku II. Jakarta : Percetakan Negara RI, 1984

Rosenshine,B. Teaching behaviours and student achievement. London : National foundation for Educational Research in England and Wales, 1971

Rosenshine,B. Recent research on teaching behaviours and student achievement. Journal of Teacher Education , 1976, 27, 61 - 64

Rosenshine.B., and Furst,N. Research on teacher performance criteria. In B.O. Smith (Ed.). Research in teacher education : Q symposium Englewood Cliffs.N.J : Prentice - Hall, 1971

Subandijo, Report on the try out of the M_2 questionnaire about student perception on the tutorial systems of the Universitas Terbuka. Jakarta : UT - IDRC, 1985

Universitas Terbuka. Research on tutorial systems : Progress report and review. Jakarta : UT - IDRC, 1985

Yoloye,A. Observational techniques. In A. Lewy (Ed.). Handbook of curriculum evaluation . New York : Unesco, 1977